

Fig. 1

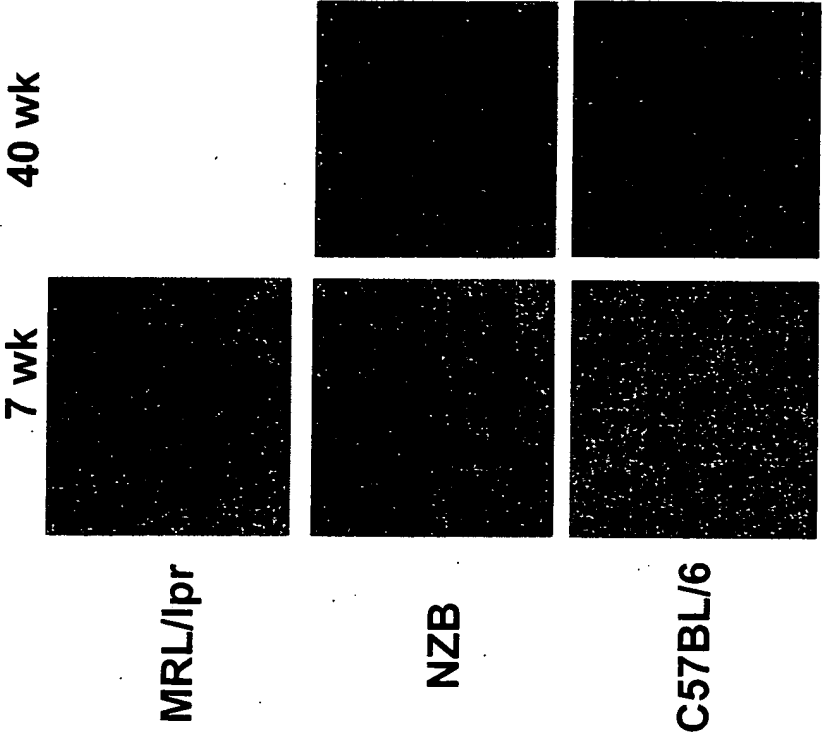


Fig. 2

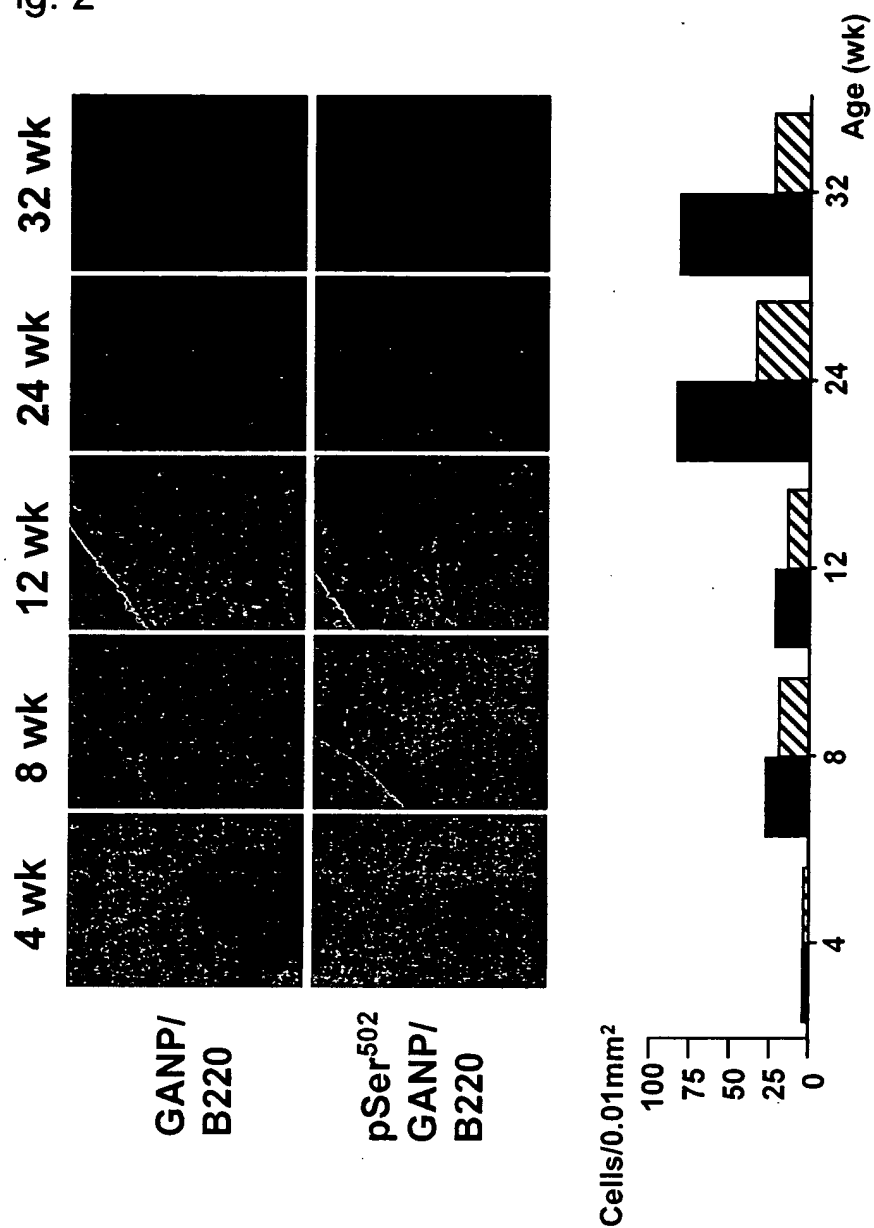


Fig. 3

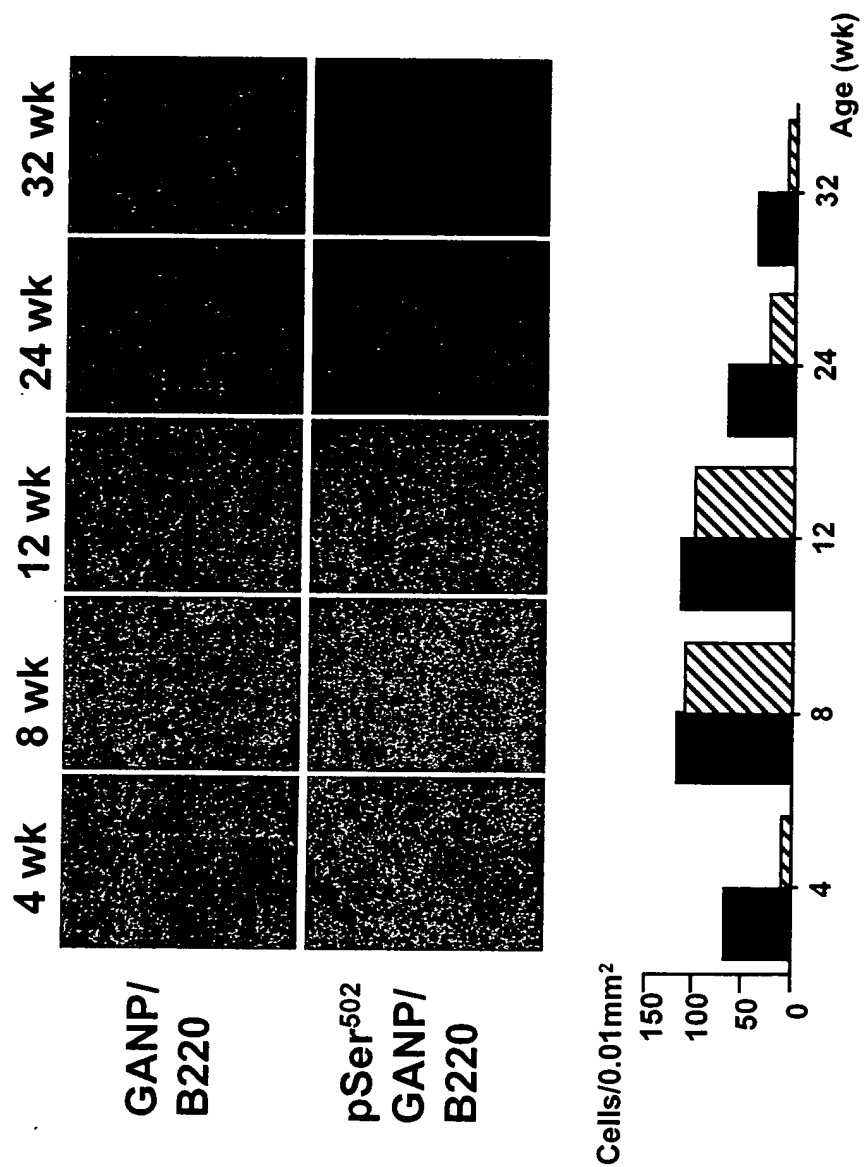


Fig. 4

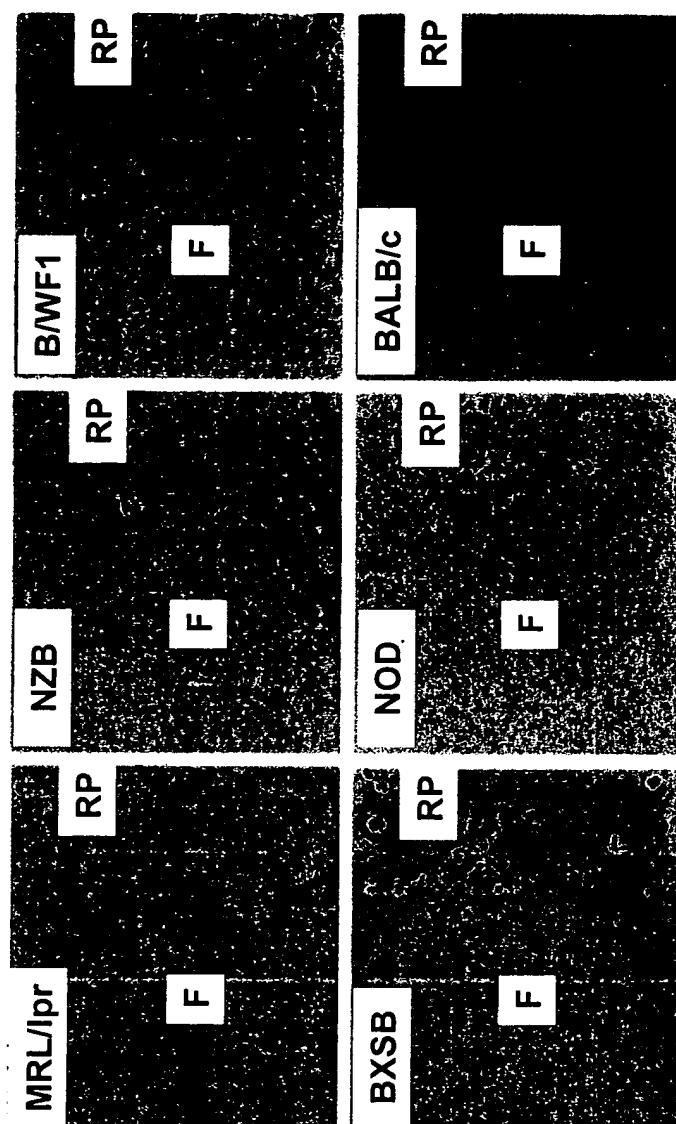


Fig. 5

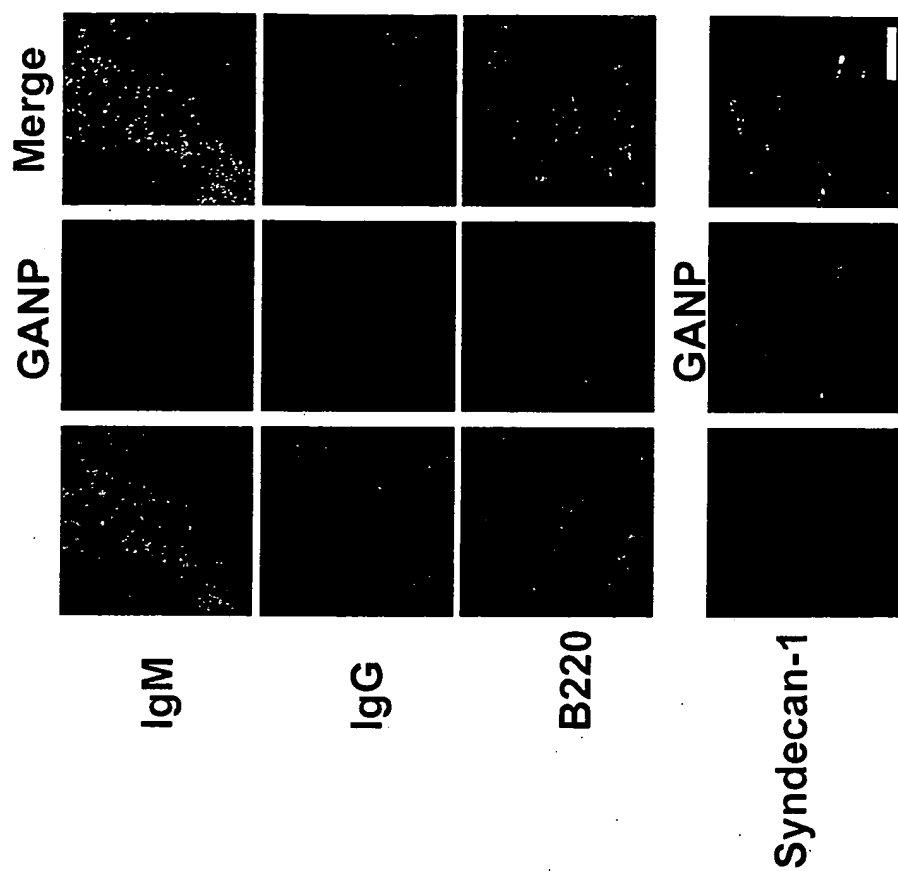


Fig. 6

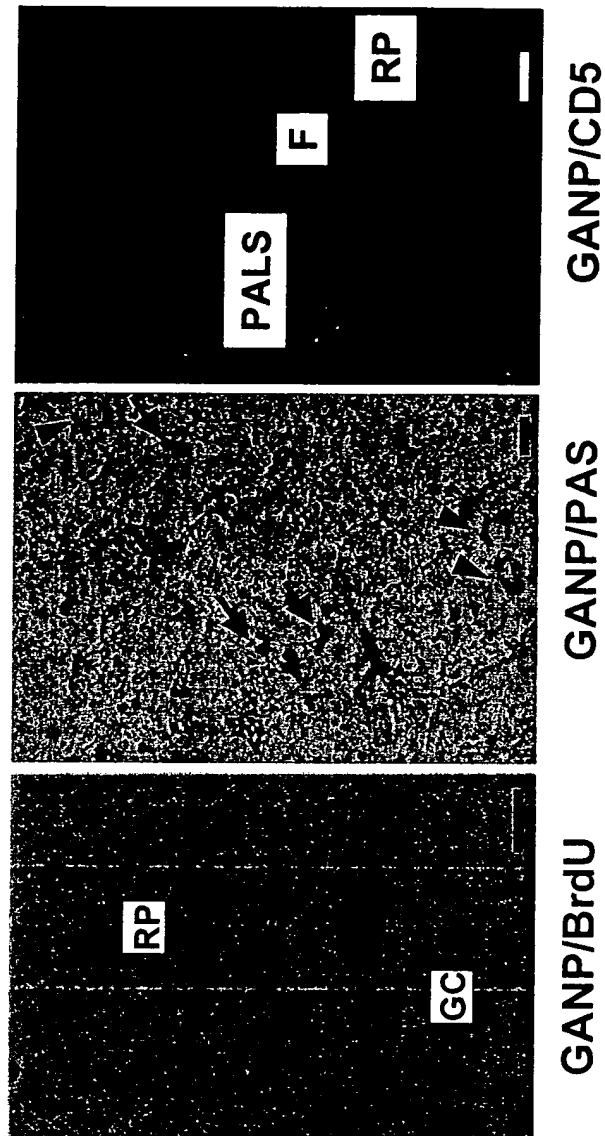


Fig. 7

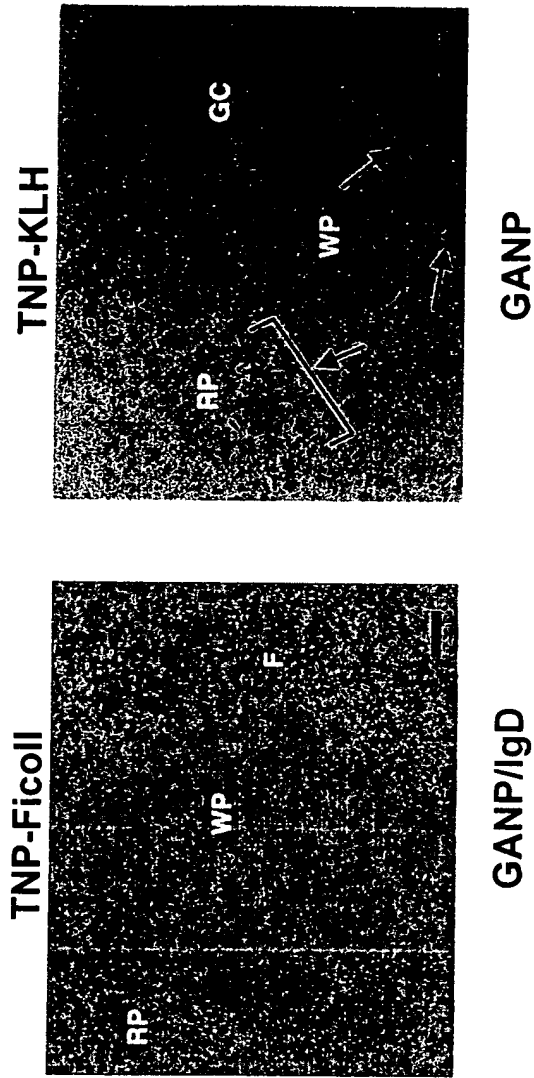


Fig. 8A

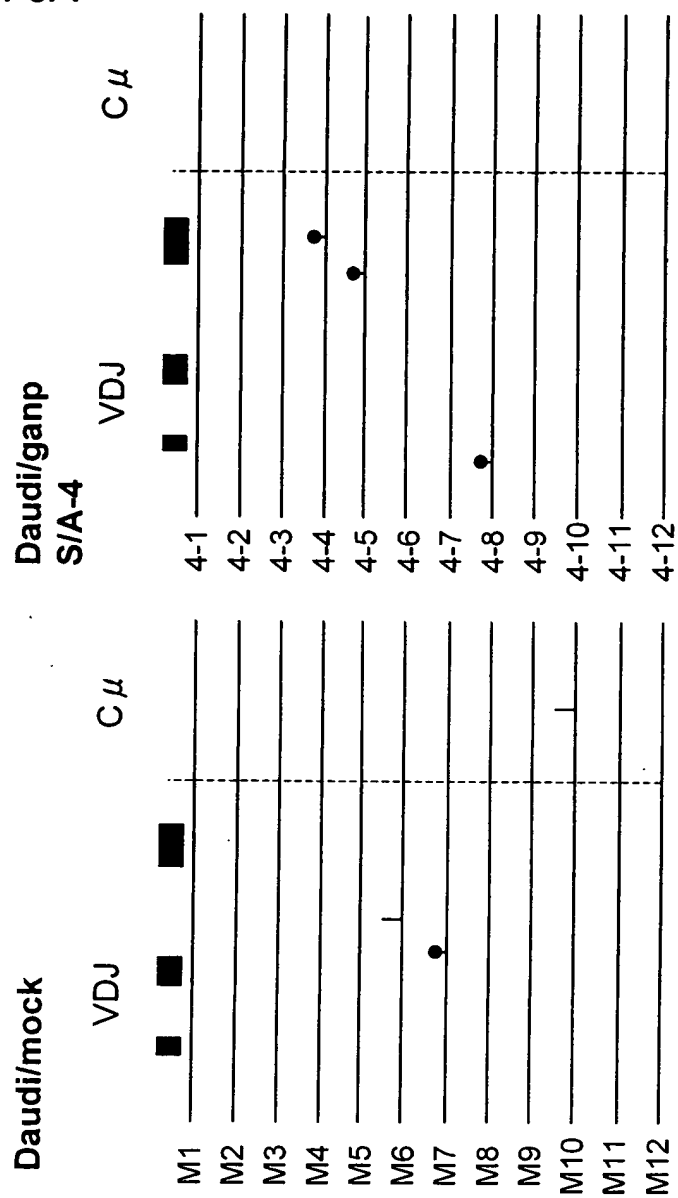


Fig. 8B

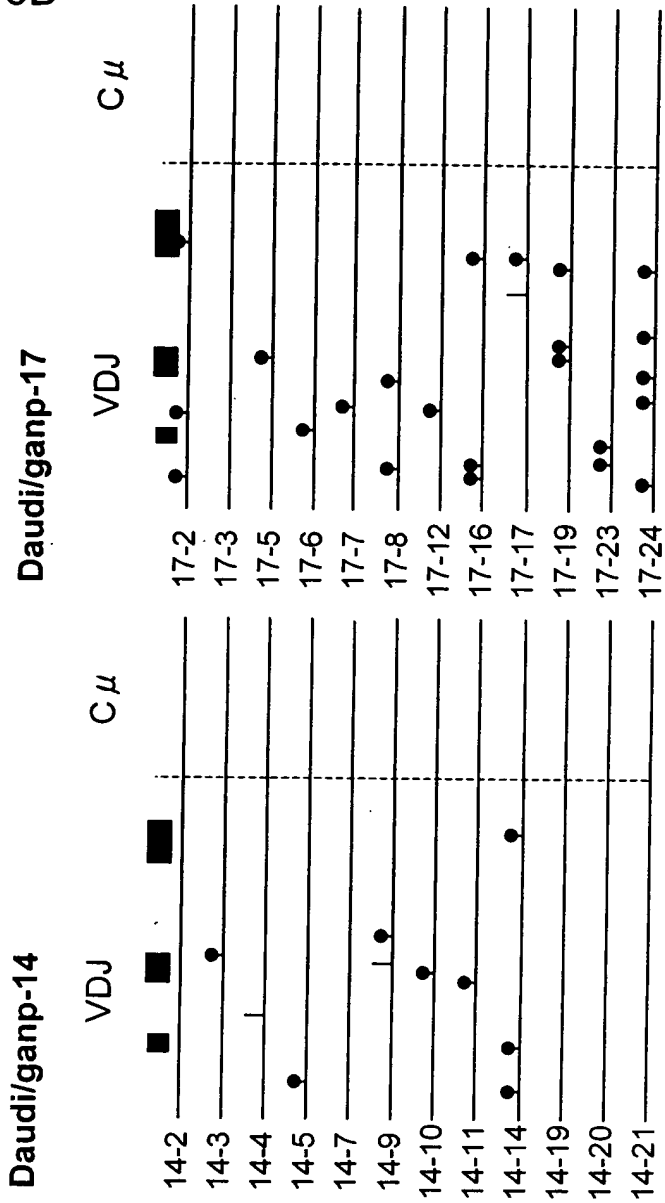


Fig. 8C

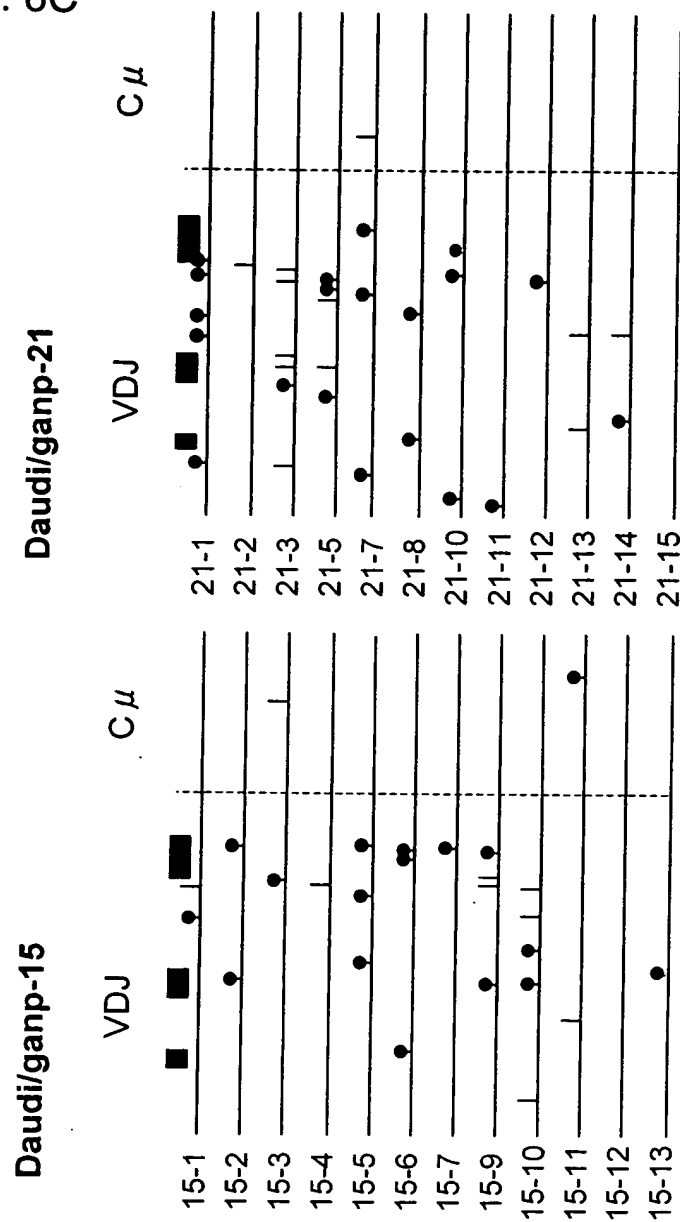


Fig. 9A

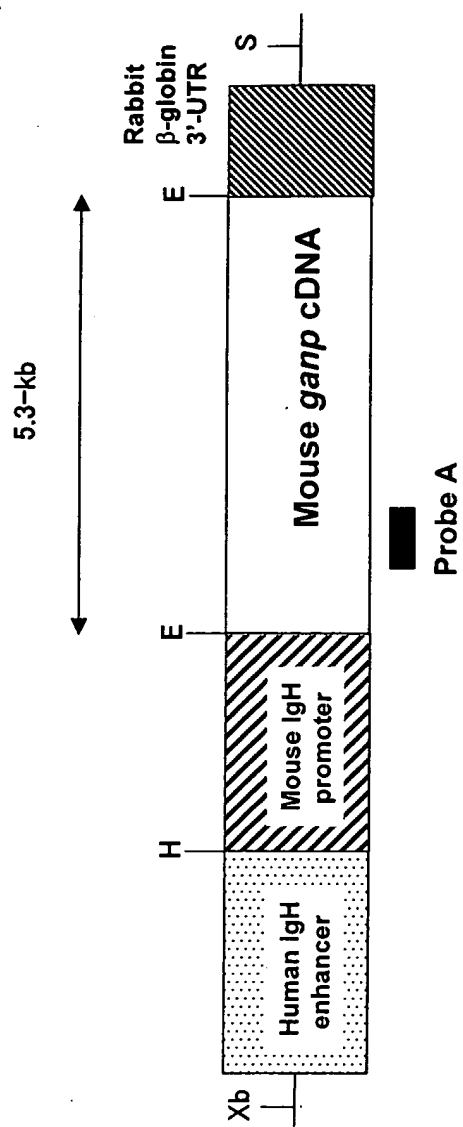


Fig. 9B

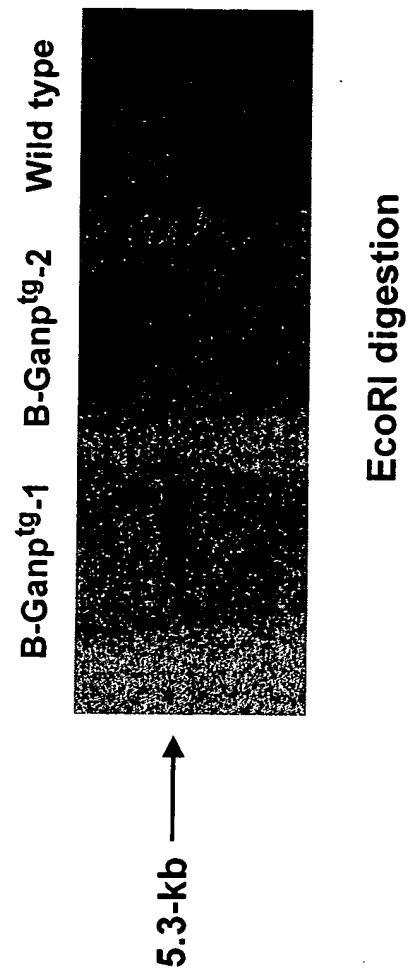


Fig. 9C

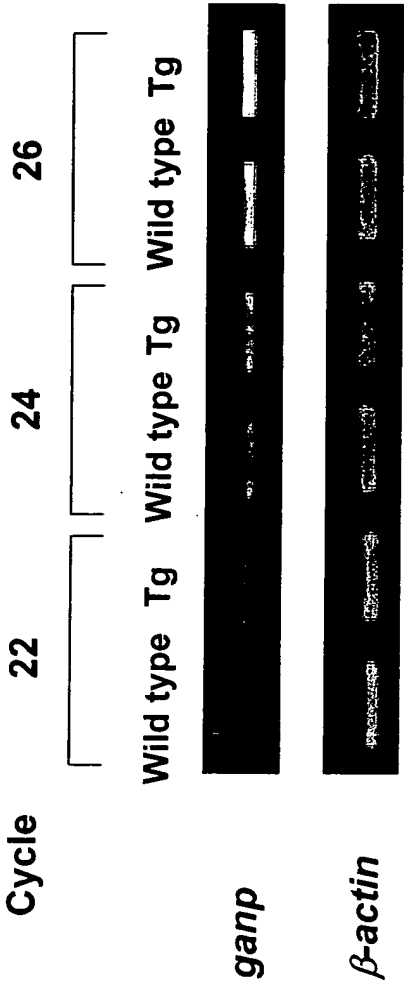


Fig. 10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Q	V	Q	L	Q	Q	P	G	A	E	L	V	K	P	G	A	S	V	K	L	S	C	K	A	S	G	Y	T	F	T
CAG	GTC	CAA	CTG	CAG	CAG	CCT	GCG	GCT	GAG	CIT	GTG	AGG	CCT	GCG	GCT	TCA	GTG	AGG	CTG	TCC	TCC	AGG	GCT	TCT	GGC	TAC	ACC	TTC	ACC
WT-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-18	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WT-22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Q	V	Q	L	Q	Q	P	G	A	E	L	V	K	P	G	A	S	V	K	L	S	C	K	A	S	G	Y	T	F	T
CAG	GTC	CAA	CTG	CAG	CAG	CCT	GGG	GCT	GAG	CCT	GAG	ANG	CCT	GGG	CCT	TCA	GIG	ANG	CTG	TCC	TCC	ANG	GCT	TCT	GAC	TAC	ACC	TTC	ACC
Tg-3---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-4---	---	---	---	---	---	---	---	A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-5---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-7---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-8---	---	---	---	---	---	---	---	---	---	---	---	---	---	S	---	---	---	---	---	---	---	P	---	---	---	---	---	---	---
Tg-9---	---	---	---	---	---	---	---	---	---	---	---	---	---	T	---	---	---	---	---	---	---	C	---	---	---	---	---	---	---
Tg-10---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	N
Tg-11---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	A
Tg-12---	---	---	---	---	---	---	---	---	---	---	---	---	---	S	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-13---	---	---	---	---	---	---	---	---	---	---	---	---	T	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-14---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	A	---	---	---	---	---	---
Tg-15---	---	---	---	---	---	---	---	---	---	---	---	---	---	R	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-16---	---	---	---	---	---	---	---	---	---	---	---	---	---	G	---	---	---	---	---	---	---	---	---	---	---	---	---	---	N
Tg-17---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	AT
Tg-18---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	I	---	---
Tg-20---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	TT
Tg-21---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tg-23---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Tg

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Fig. 11A

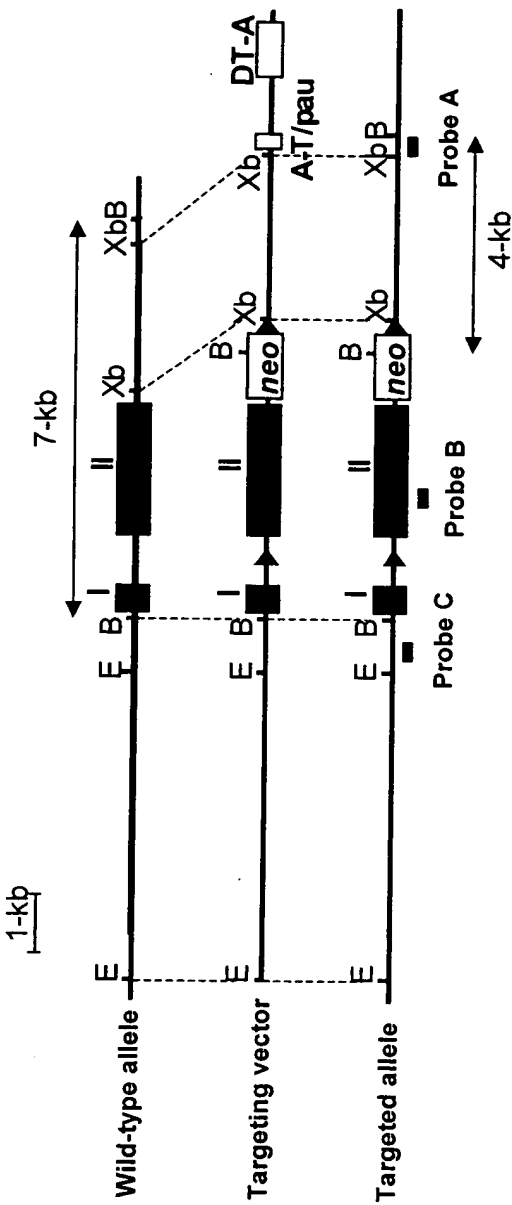


Fig. 11B

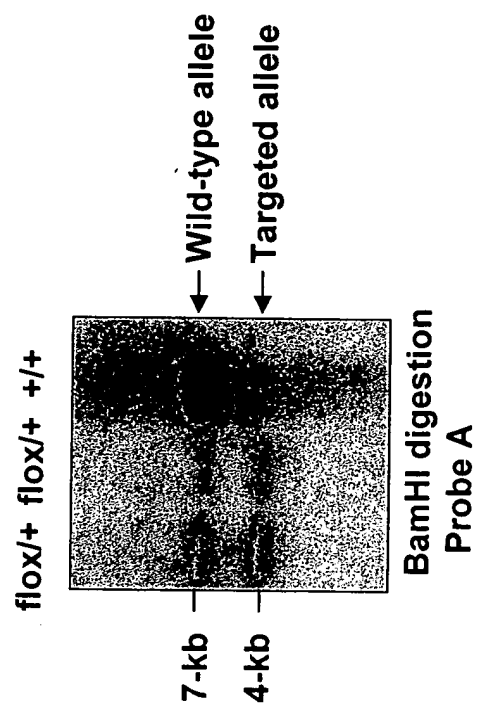


Fig. 11C

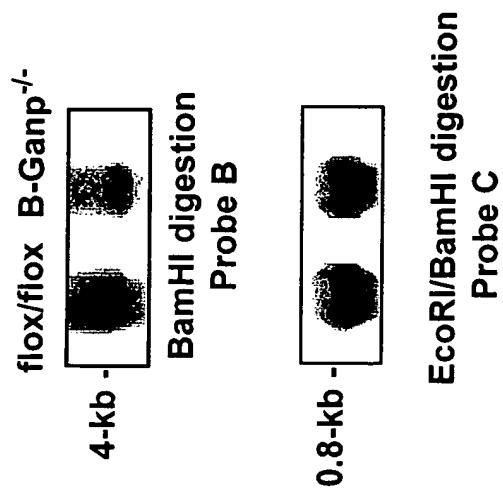


Fig. 11D

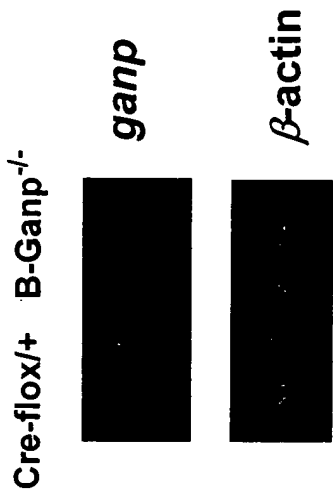


Fig. 11E

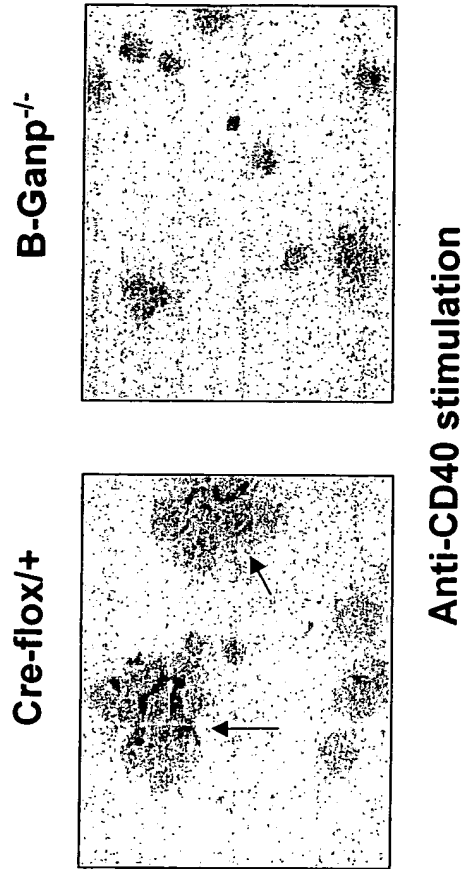


Fig. 12

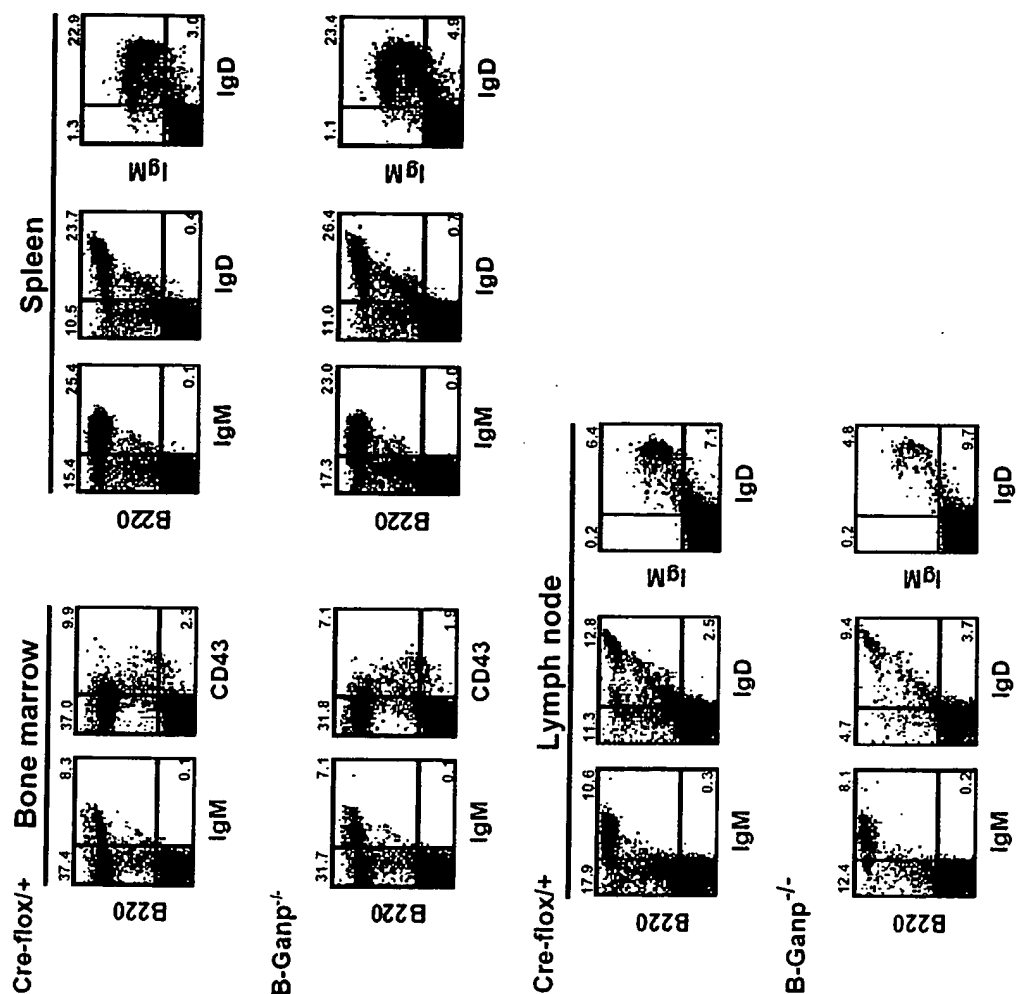


Fig. 13

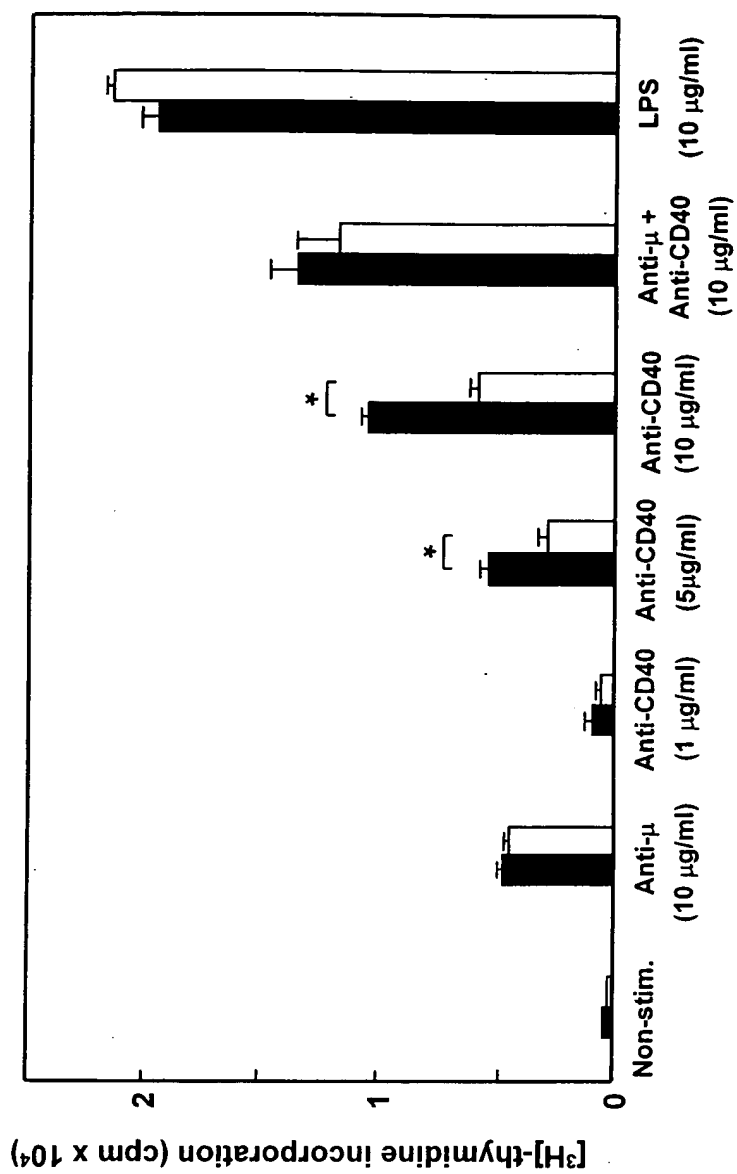


Fig. 14

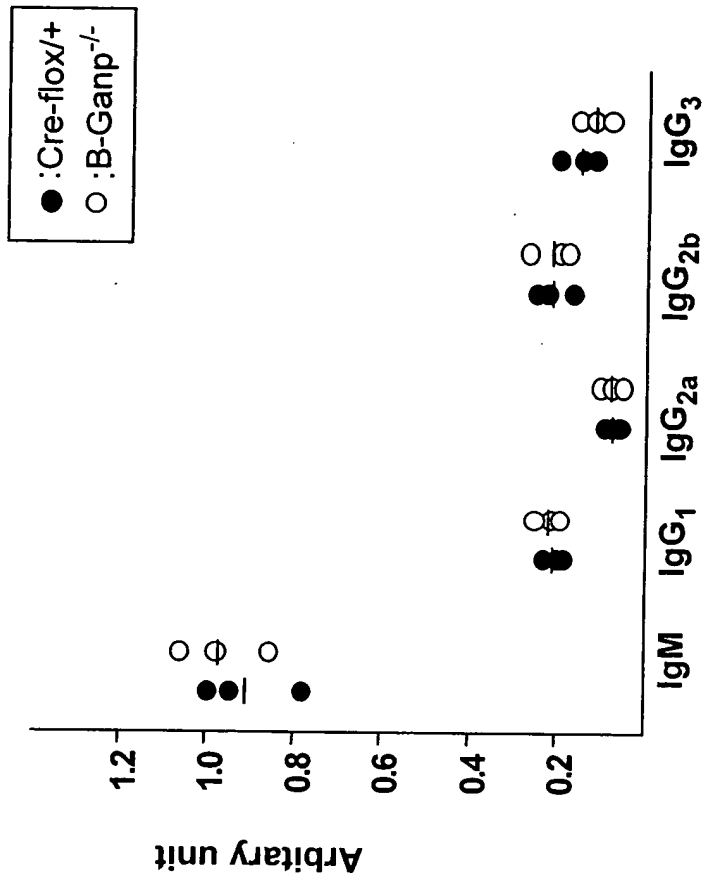


Fig. 15

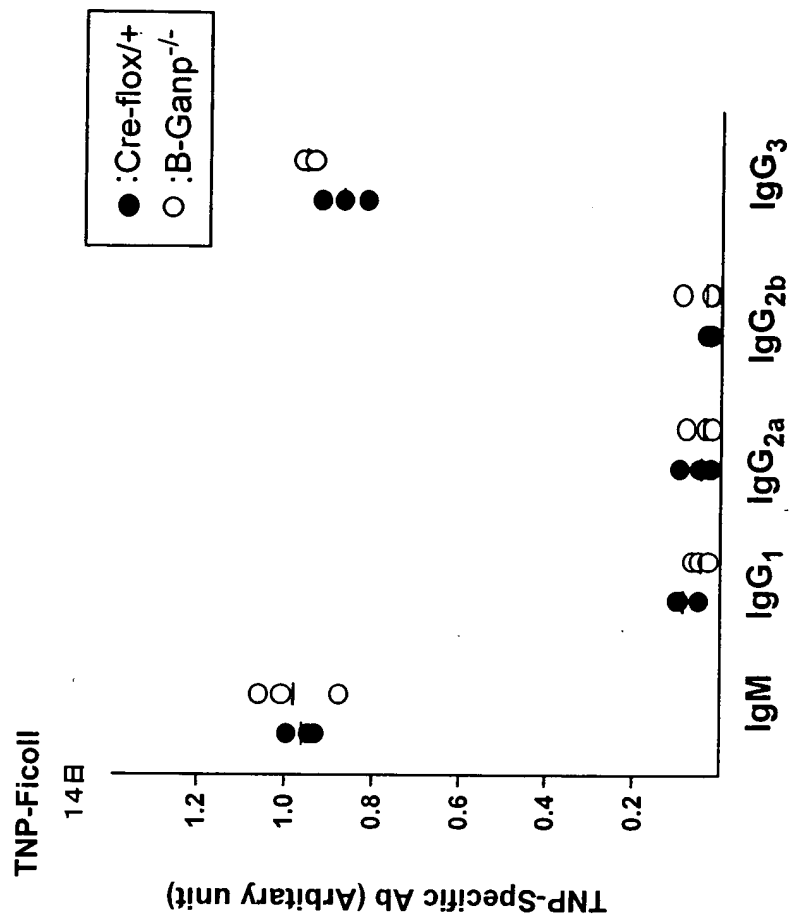


Fig. 16

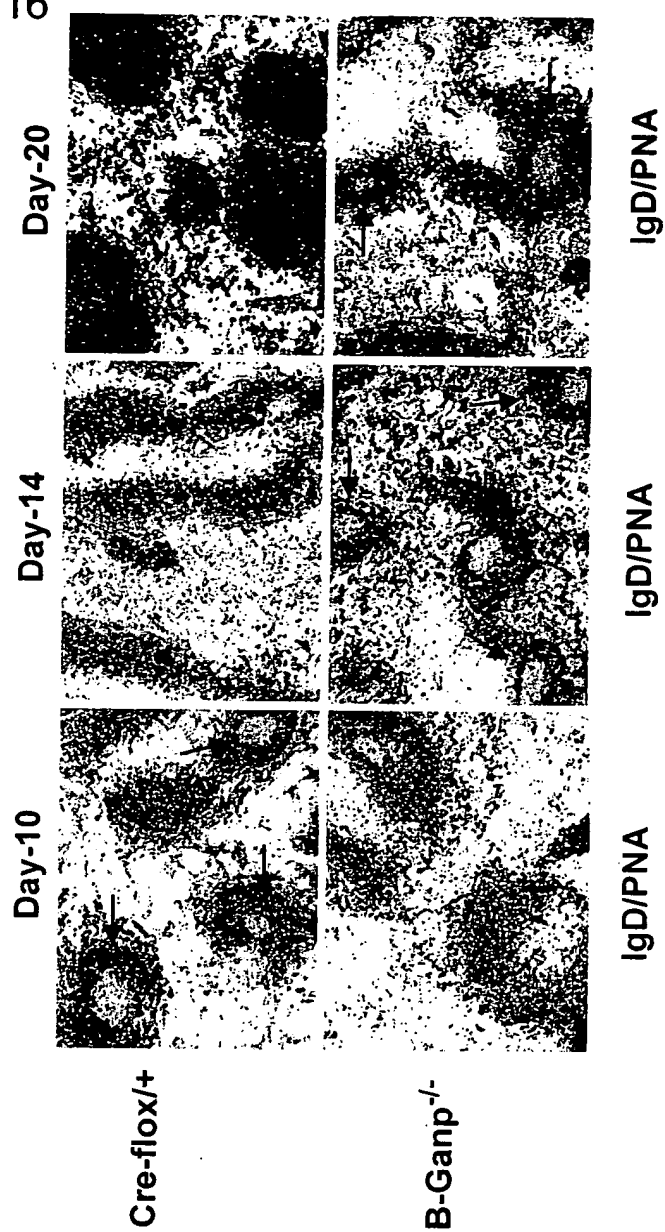


Fig. 17

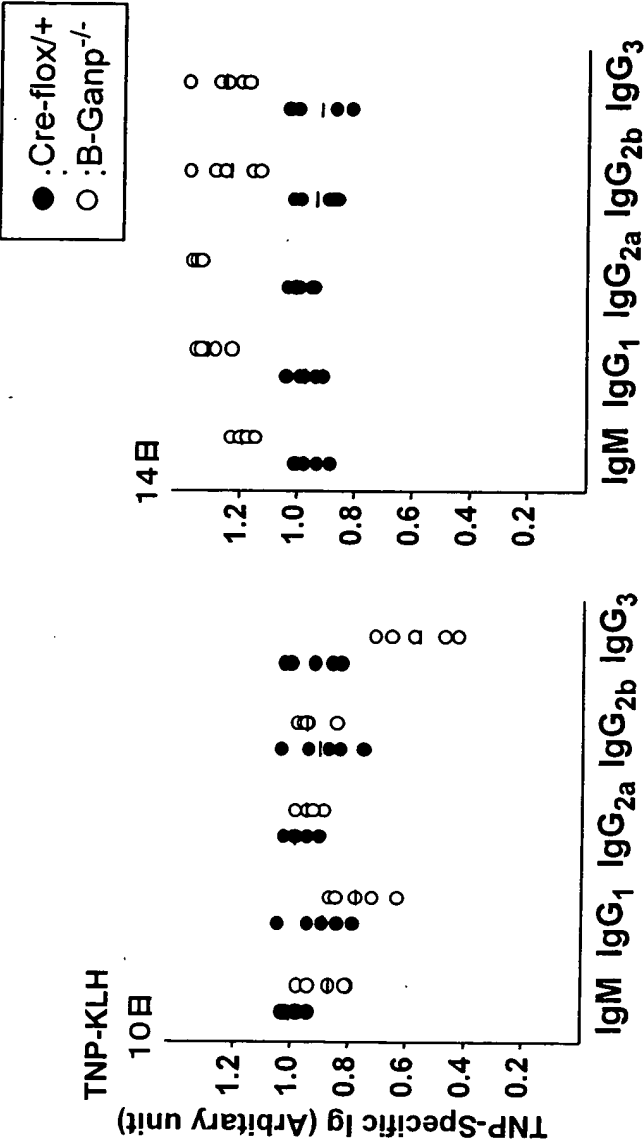


Fig. 18

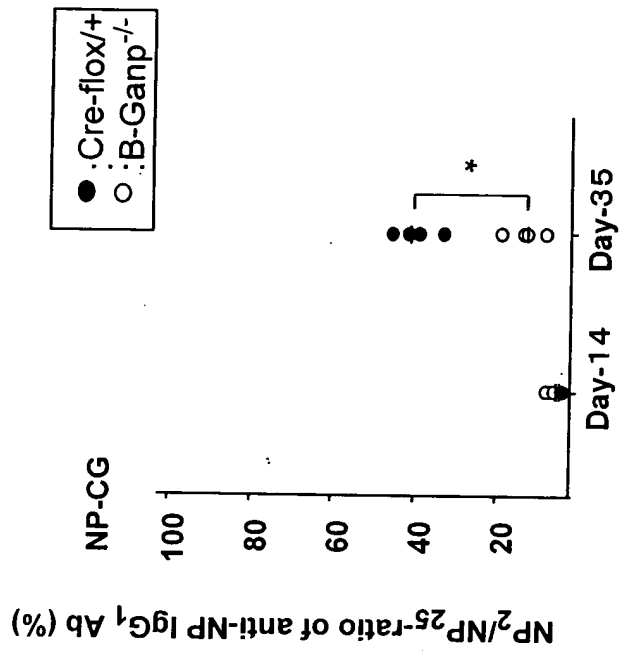


Fig. 19

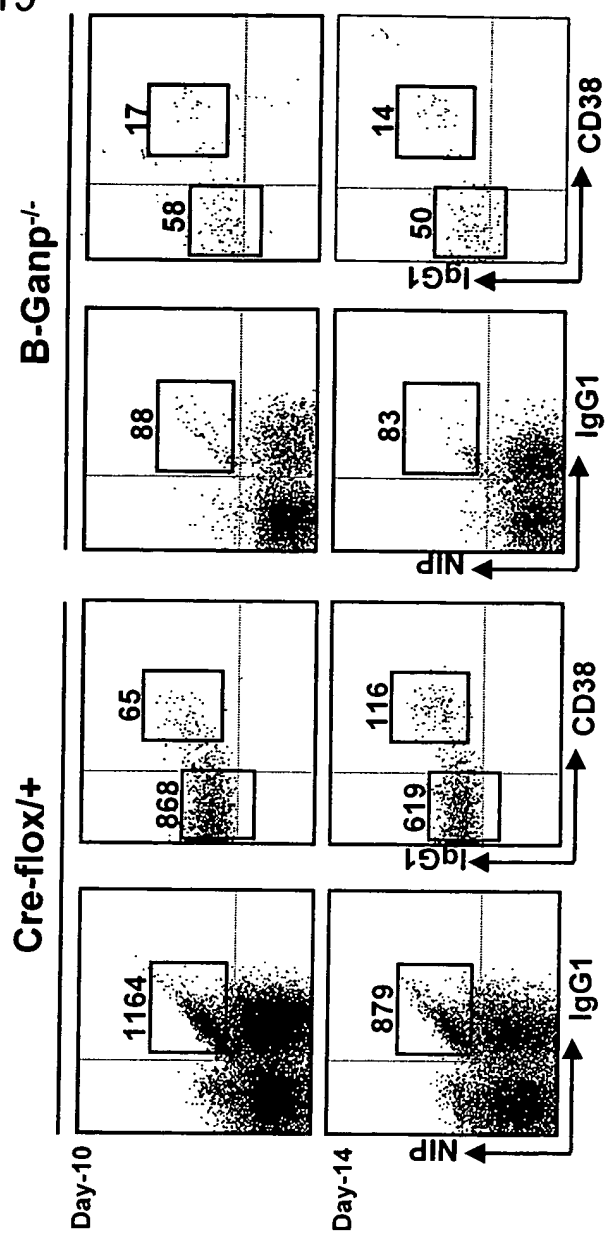


Fig. 20A

Cre-flox/+

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Q	V	Q	L	Q	Q	P	G	A	E	L	V	K	P	G	A	S
	CAG	GTC	CAA	CTG	CAG	CAG	CCT	GGG	GCT	GAG	CTT	GTG	AAG	CCT	GGG	GCT	TCA
1-5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-6	---	---	---	---	---	---	---	---	---	---	A	---	---	---	---	---	---
3-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3-2	---	---	---	---	---	---	---	---	---	---	---	---	R	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	G	---	---	---	---
3-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G
4-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G	---
4-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G	---
4-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G
4-7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	G	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6-1	---	---	---	---	---	---	---	---	T	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	A	---	---	---	---	---	---	---	---
6-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Fig. 20B

Cre-flox/+

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
V	K	L	S	C	K	A	S	G	Y	T	F	T	S	Y	W	M	H
GTG	AAG	CTG	TCC	TGC	AAG	GCT	TCT	GGC	TAC	ACC	TTC	ACC	AGC	TAC	TGG	ATG	CAC
	I							A									
---	-TT	---	---	---	---	---	---	-C	---	---	---	---	---	-T	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	R	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	-T	A	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	T	---	L	I	---
---	---	---	---	---	---	---	---	---	---	---	---	---	-C	---	-T	-T	---
---	---	---	---	---	---	---	---	---	I	---	---	---	---	*	---	---	---
---	-C	---	---	---	---	---	---	---	-A	-TT	---	---	---	-G	---	---	---
---	---	---	---	---	---	---	---	---	---	---	L	---	T	---	L	---	---
---	---	---	---	---	---	---	---	-T	---	---	C	---	-C	---	TA	---	---
---	---	---	---	---	---	---	---	---	---	---	L	---	T	---	L	---	---
---	---	---	---	---	---	---	---	---	---	---	C	---	-C	---	TA	---	---
---	---	---	---	---	---	---	---	---	---	---	L	---	T	---	L	---	---
---	---	---	---	---	---	---	---	---	---	---	C	---	-C	---	TA	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	T	---	L	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	-C	---	-T	A	---
---	---	---	---	---	---	---	---	---	---	---	---	---	T	---	L	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	-C	---	-T	T	---
---	---	---	---	---	---	---	---	---	---	L	---	---	T	---	L	---	---
---	---	---	---	---	---	---	---	---	---	C	---	---	-C	---	TA	---	---
---	---	---	---	---	---	---	---	---	F	---	---	---	---	---	L	---	---
---	---	---	---	---	---	---	---	---	-T	---	---	---	---	---	-T	---	---
---	V	---	---	---	---	---	---	---	---	---	---	---	---	---	L	---	---
---	G	---	---	---	---	---	---	---	---	---	---	---	---	---	-T	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	N	---	L	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	-A	---	-T	---	---

Cre-flox/+

A

Fig. 20D

Cre-flox/+

	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
	R	I	D	P	N	S	G	G	T	K	Y	N	E	K	F	K	S	K
	AGG	ATT	GAT	CCT	AAT	AGT	GGT	GGT	ACT	AAG	TAC	AAT	GAG	AAG	TTC	AAG	AGC	AAG
1-5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3-1	---	---	---	---	---	---	---	D -A-	-A-	---	---	---	---	---	---	---	---	---
3-2	---	---	---	M -TG	---	---	---	S -C	R -G-	---	---	---	---	Y T-C	---	---	---	---
3-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-8	---	---	---	K -A-	---	---	---	---	---	---	---	S -G-	---	---	---	---	---	---
1-10	V G-	---	---	T -C-	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-7	---	---	---	---	---	---	---	D -A-	---	---	---	---	---	---	---	---	---	---
6-1	---	---	---	---	---	---	---	---	---	---	---	---	T -C-	---	---	N -A-	---	---
6-2	---	---	---	---	---	---	S A-	---	---	---	---	---	---	---	---	T -C-	---	---
7-1	---	---	---	---	---	---	---	---	---	---	---	---	T -C-	---	---	N -A-	---	---

Fig. 20E

Cre-flox/+

68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
A	T	L	T	V	D	K	P	S	S	T	A	Y	M	Q	L	S
GCC	ACA	CTG	ACT	GTA	GAC	AAA	CCC	TCC	AGC	ACA	GCC	TAC	ATG	CAG	CTC	AGC

----- T -----

----- I -----

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----- Q ----- F -----

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----- A -----

----- T -----

Cre-flox/+

T D
A G

Fig. 20G

B-Ganp^{-/-}

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Q	V	Q	L	Q	Q	P	G	A	E	L	V	K	P	G	A	S
	CAG	GTC	CAA	CTG	CAG	CAG	CCT	GGG	GCT	GAG	CTT	GTG	AAG	CCT	GGG	GCT	TCA
1-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4-3	---	---	---	---	---	---	---	---	T A	---	A	---	G	---	---	---	---
4-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
8-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Fig. 20H

B-Ganp^{-/-}

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		
V	K	L	S	C	K	A	S	G	Y	T	F	T	S	Y	W	M	H		
GTG	AAG	CTG	TCC	TGC	AAG	GCT	TCT	GGC	TAC	ACC	TTC	ACC	AGC	TAC	TGG	ATG	CAC		

I						A													
-TT						-C-						-T							

												N							
												-A-	-T						
												N							
												-A-							
														L					
														-T-					
												N							
												-A-							
										F									
										-T	-A								
										F									
										-T	-A								
												C							
												-G-							
												N			L				
												-A-	-T-						
												N							
												-A-							
						T													
						A-									L				
												T			C				
														-C-			C		

B-Ganp^{-/-}

—G

Fig. 20J

B-Ganp^{-/-}

	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
	R	I	D	P	N	S	G	G	T	K	Y	N	E	K	F	K
	AGG	ATT	GAT	CCT	AAT	AGT	GGT	GGT	ACT	AAG	TAC	AAT	GAG	AAG	TTC	AAG
					K											
1-1	---	---	---	---	-A-	---	---	---	---	.	---	---	---	---	---	---
1-5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2-2	---	---	---	---	---	---	---	---	S	T	---	---	---	---	---	---
2-3	---	T	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	N		N						N							
4-3	-AT	---	A-	---	---	---	---	---	---	-C	---	---	---	---	---	---
					G											
4-4	---	---	---	---	G-	---	---	---	---	---	---	---	---	---	---	---
6-1	---	---	---	---	---	---	---	---	---	---	T	---	E	G-	---	---
6-2	---	---	---	---	---	---	---	---	---	T	---	---	---	---	---	---
					G				F	D						
7-1	---	---	---	---	G-	---	---	---	-T-	G-	---	---	---	---	---	---
8-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
					G									E		
8-2	---	---	---	---	G-	---	---	---	-A	---	---	---	-G-	---	---	---
								A								
9-1	---	---	---	---	---	---	---	G-C	---	---	---	---	---	---	---	---
9-3	---	---	---	---	---	-C	---	---	---	---	---	---	---	---	---	---
9-4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Fig. 20K

B-Ganp^{-/-}

66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
S	K	A	T	L	T	V	D	K	P	S	S	T	A	Y	M	Q
AGC	AAG	GCC	ACA	CTG	ACT	GTA	GAC	AAA	CCC	TCC	AGC	ACA	GCC	TAC	ATG	CAG

---T ---

 ---A
 ---A
 ---C
 N
 ---A ---A ---G
 S
 T
 ---C

 ---T ---A

 ---T
 S
 T

B-Ganp^{-/-}

C

C

C

C

F
T

Fig. 21

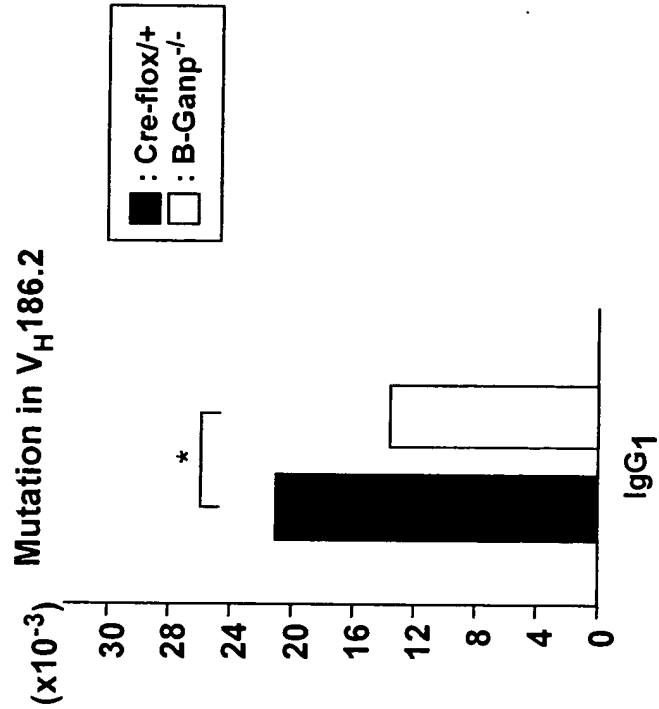


Fig. 22

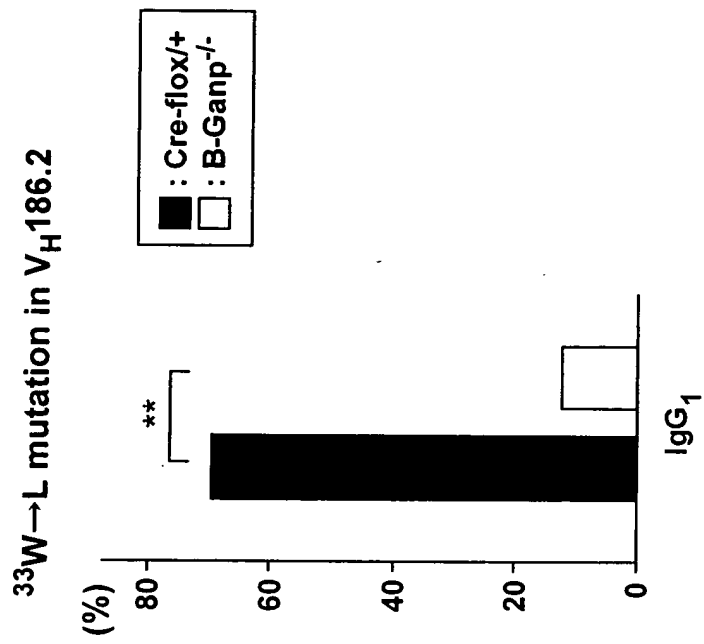


Fig. 23

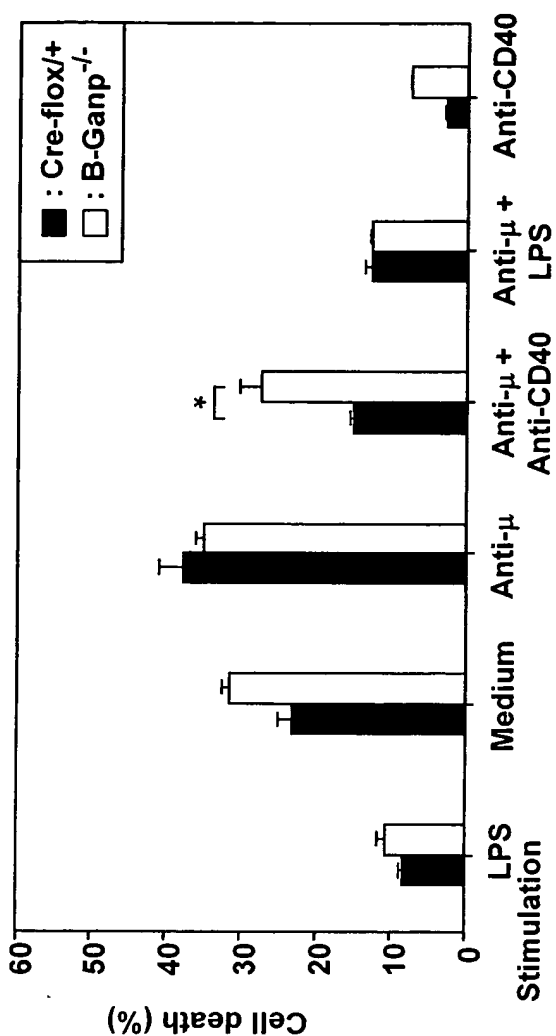


Fig. 24

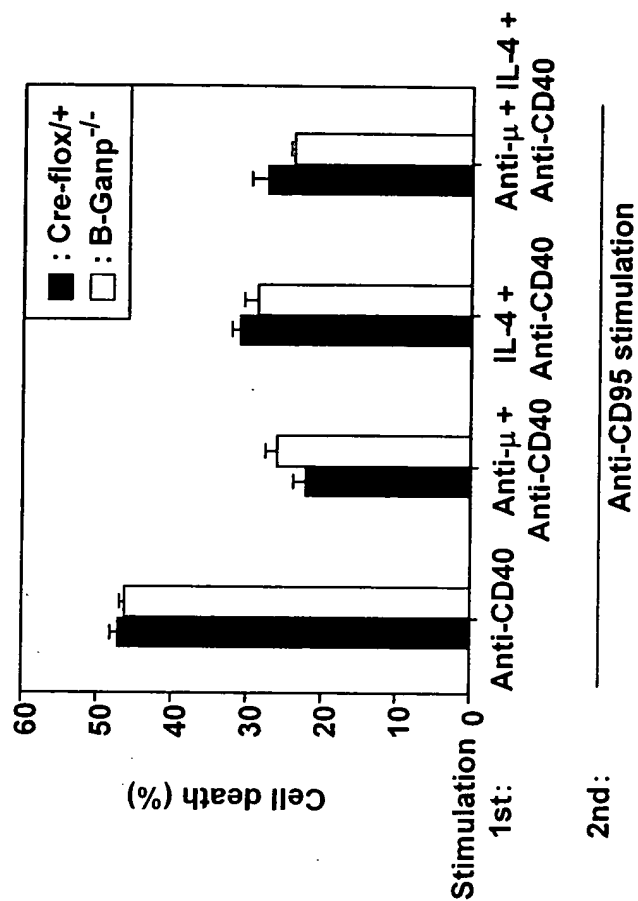


Fig. 25

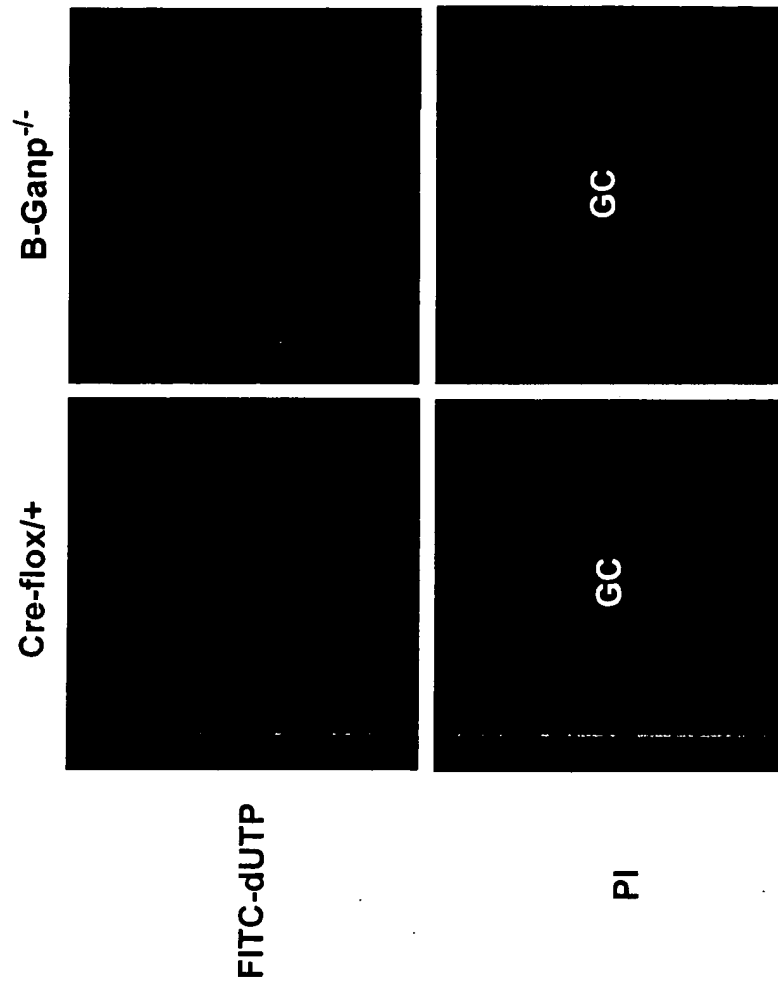


Fig. 26

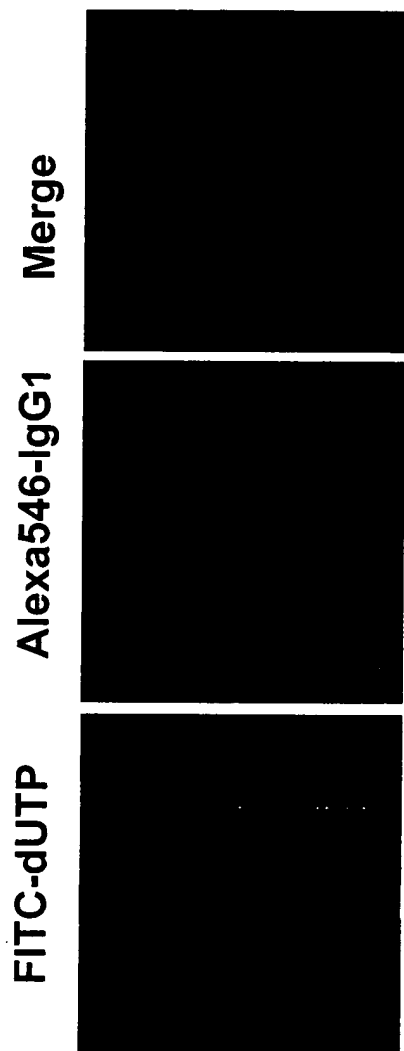


Fig. 27

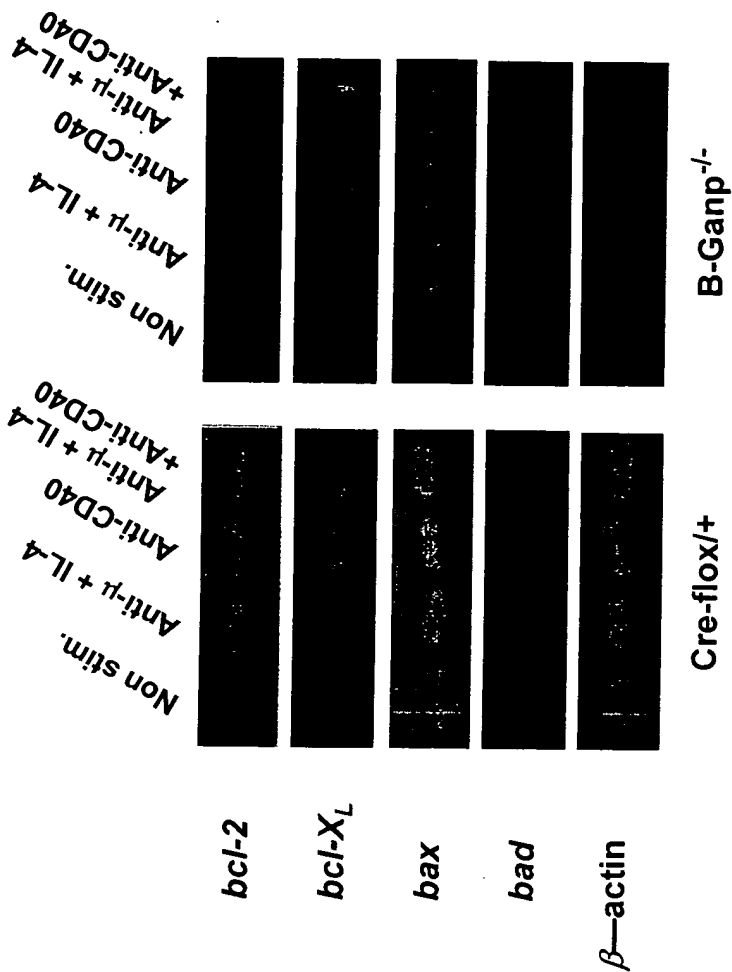


Fig. 28

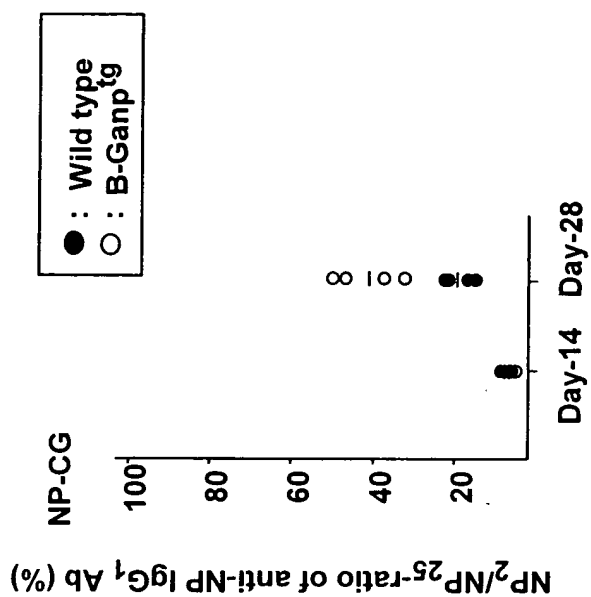


Fig. 29

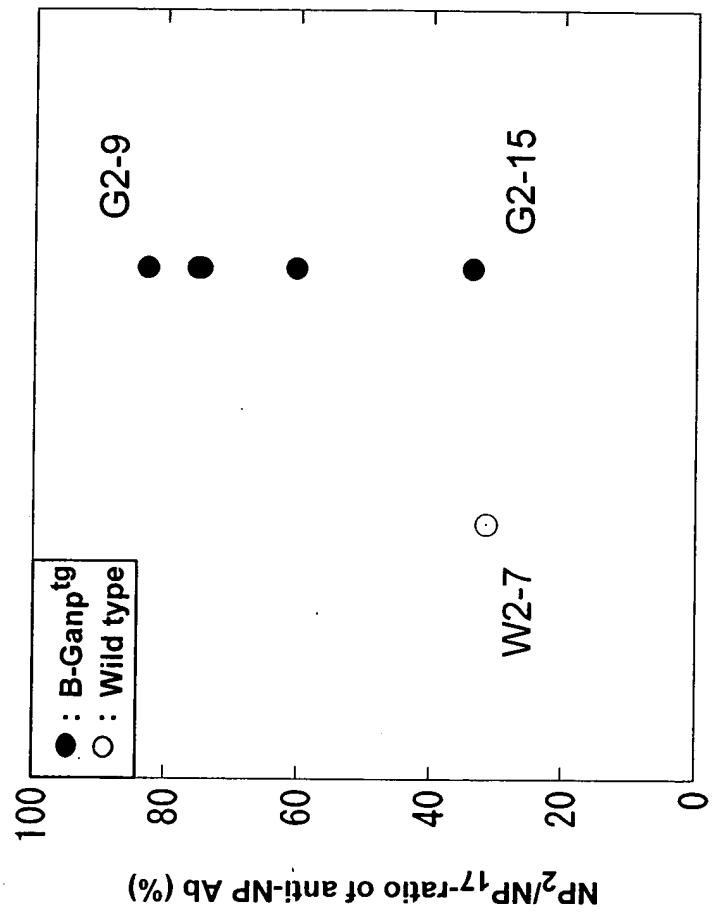
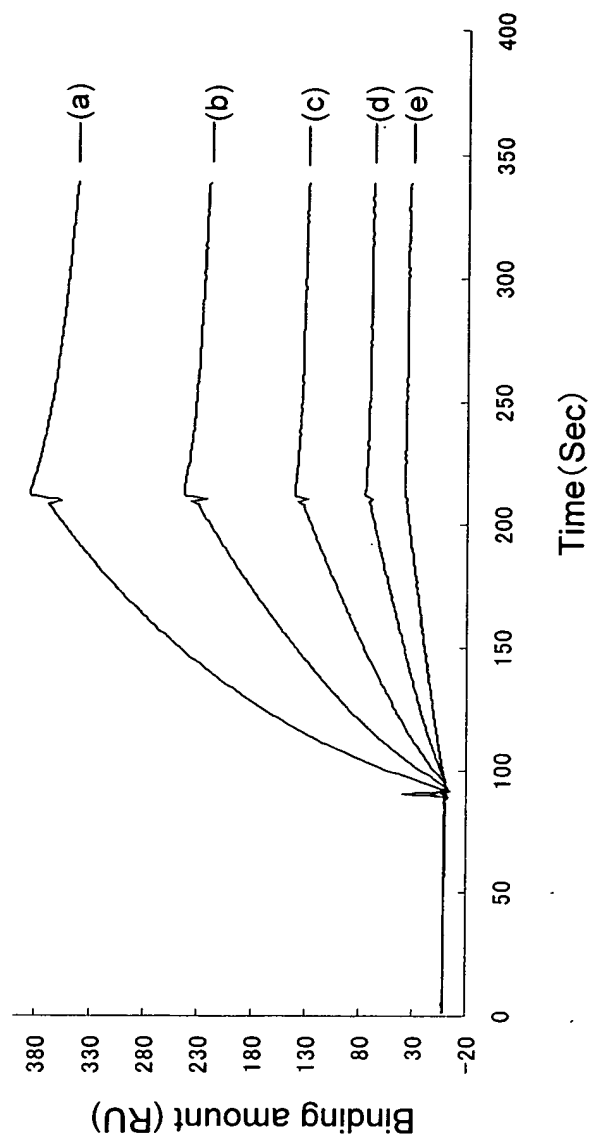


Fig. 30

BIACORE (G2-9, IgG1, κ)



BIACORE (G2-15, IgG1, λ)

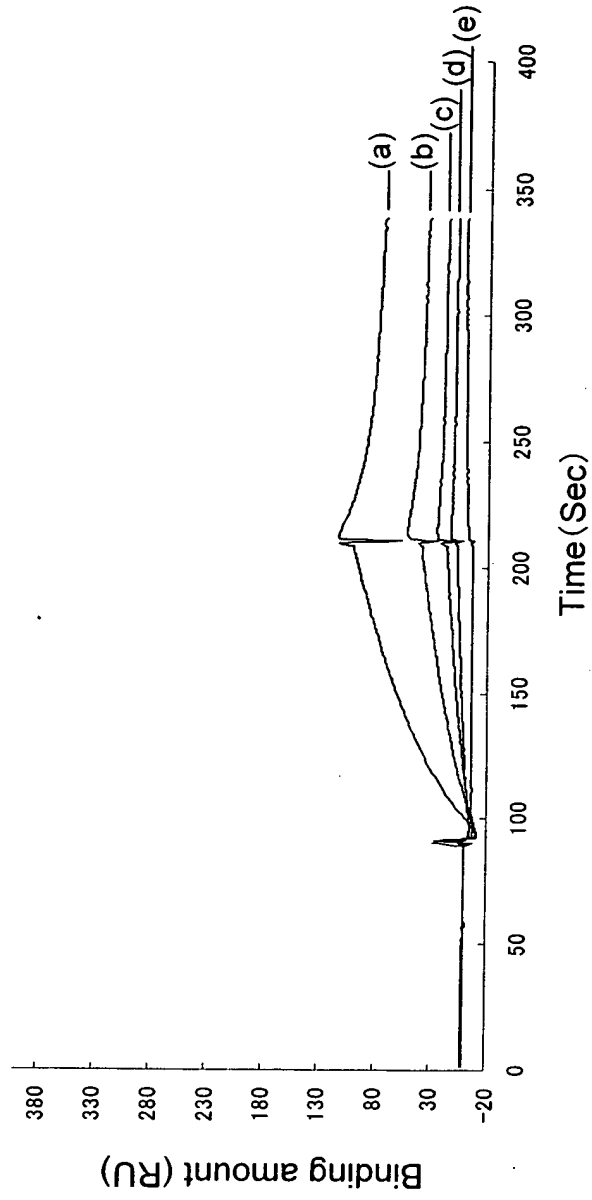


Fig. 31

Fig. 32

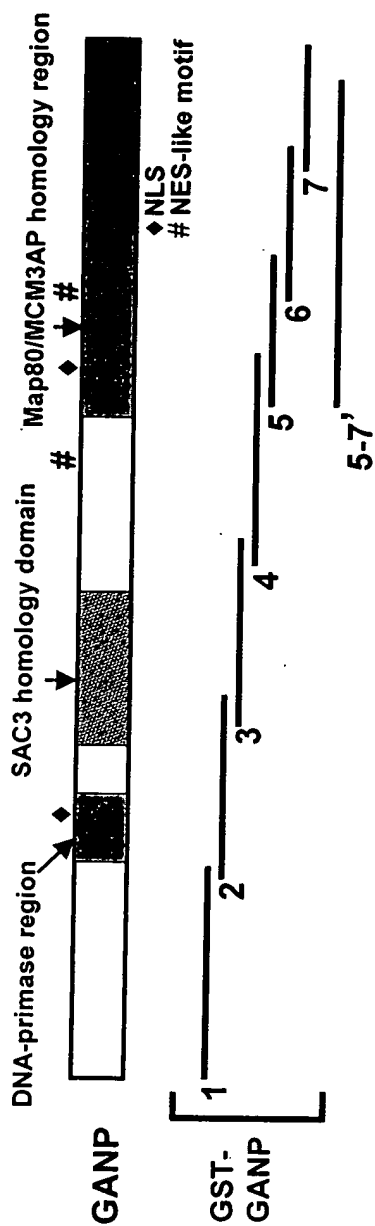


Fig. 33

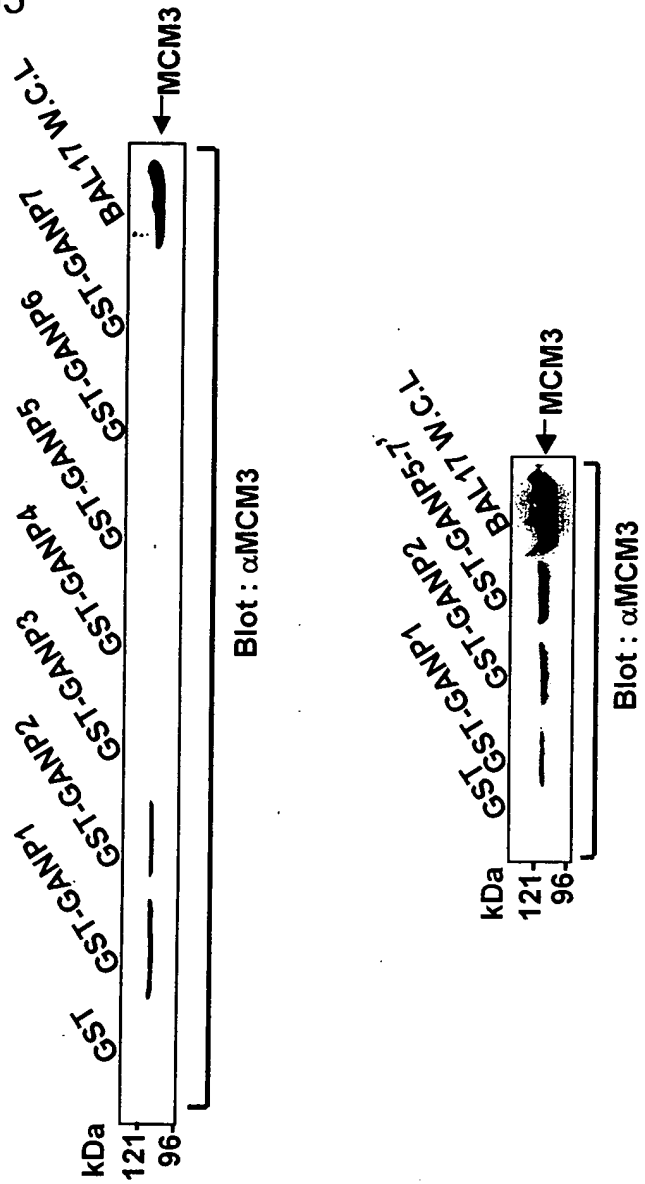


Fig. 34

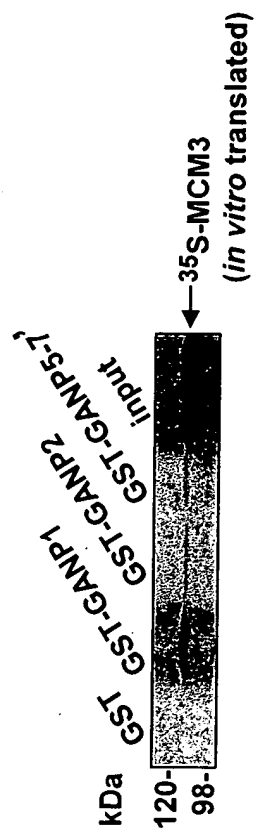


Fig. 35

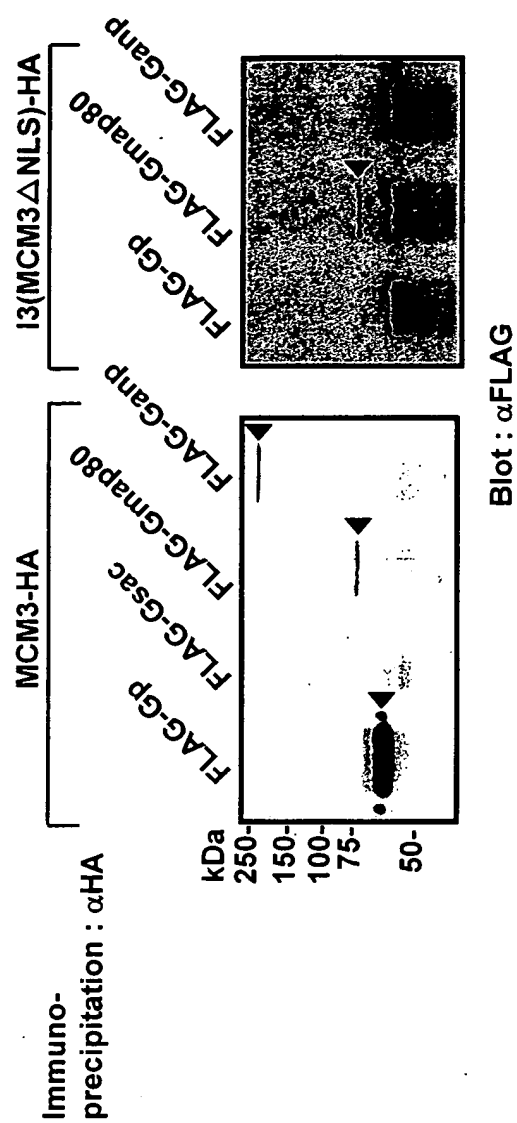


Fig. 36A

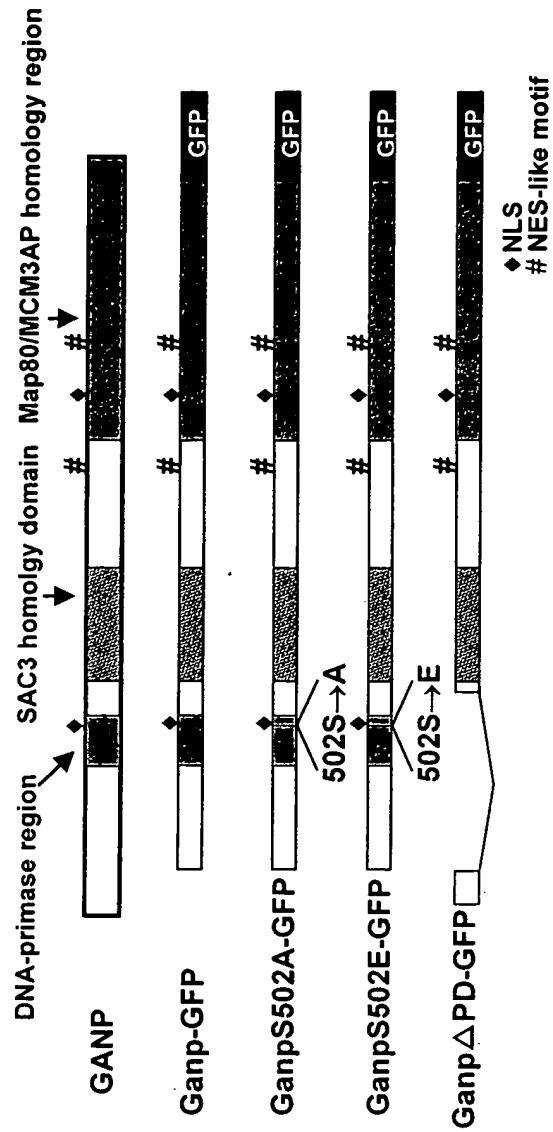


Fig. 36B

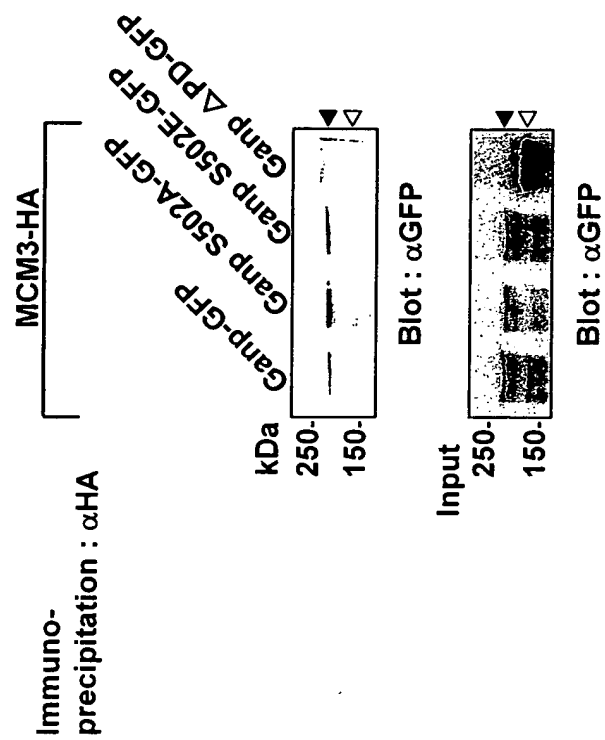


Fig. 37

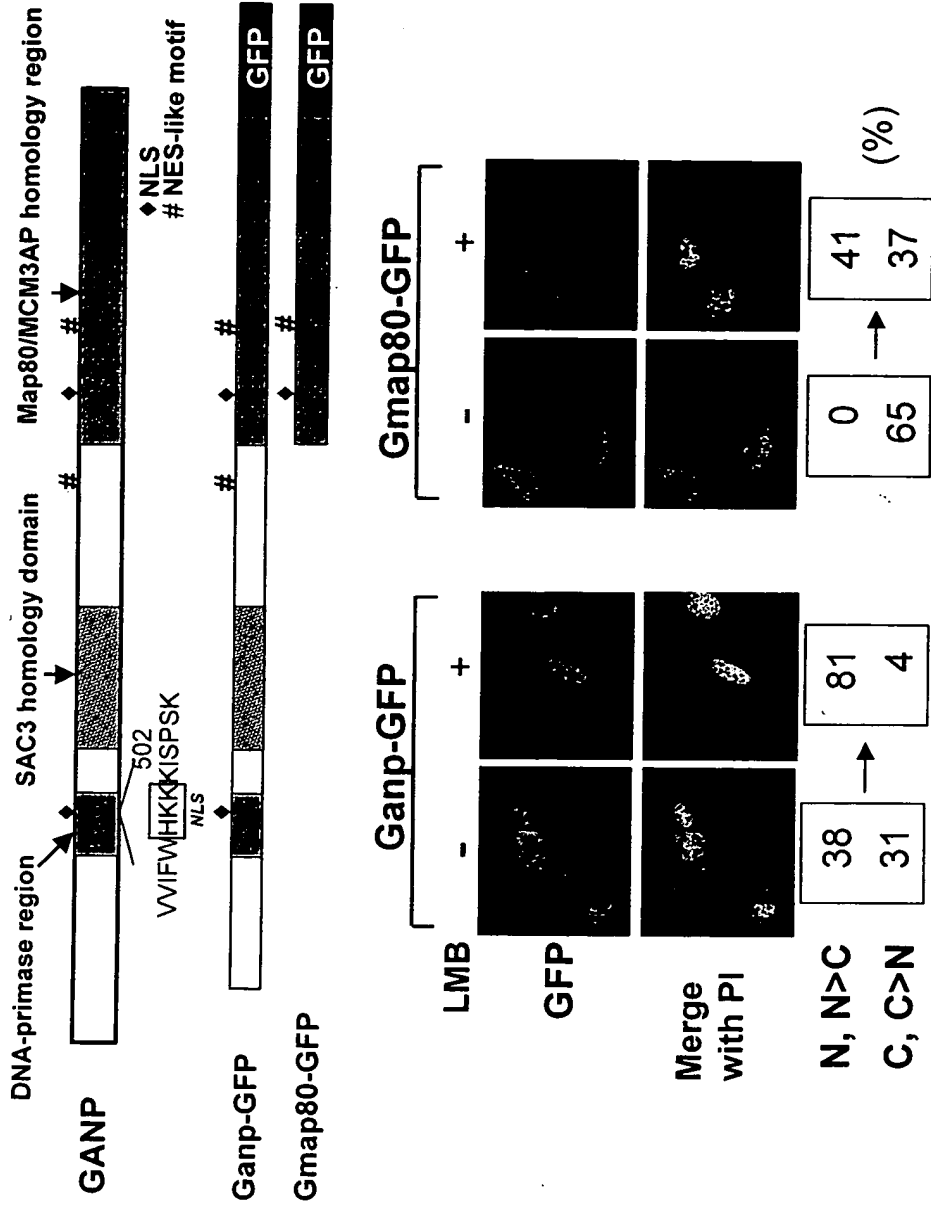


Fig. 38

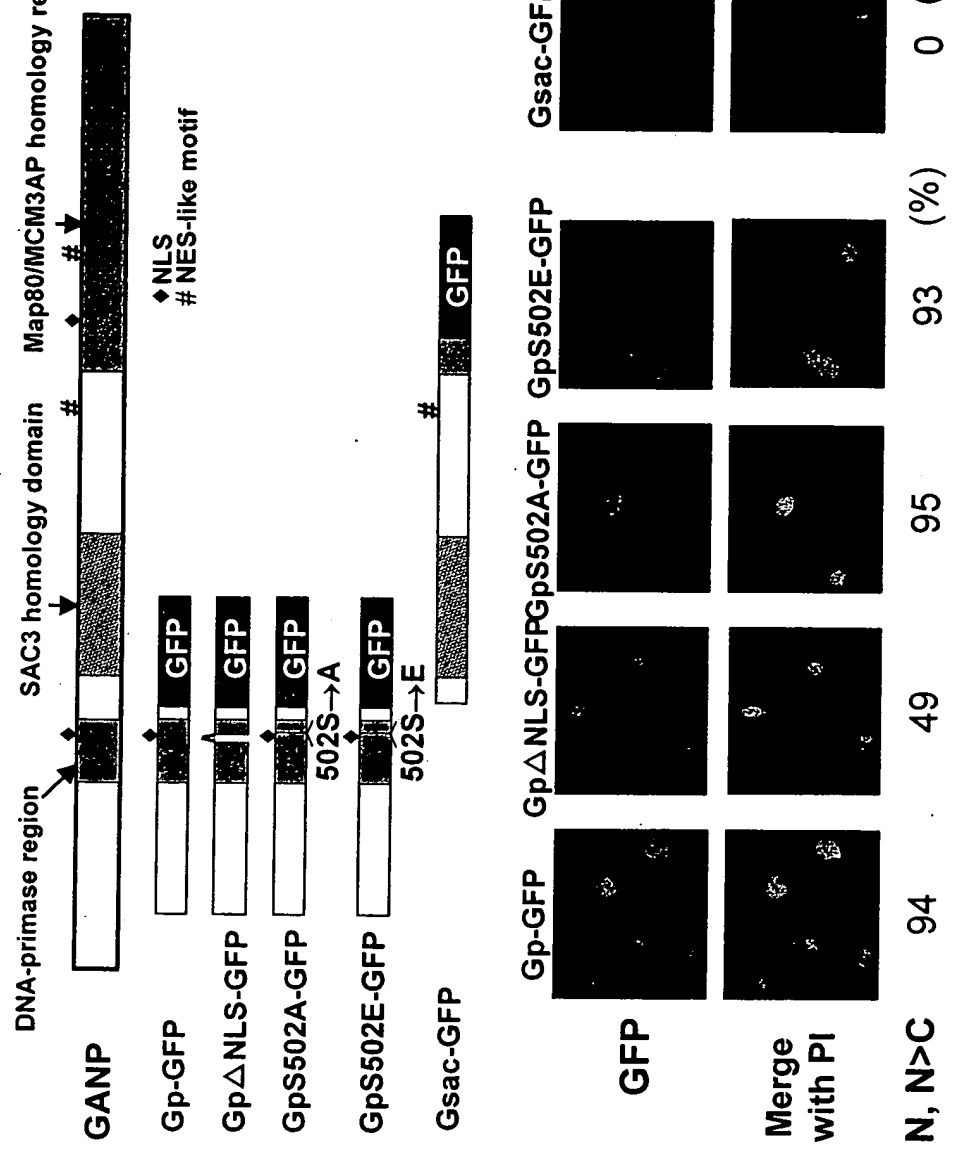


Fig. 39

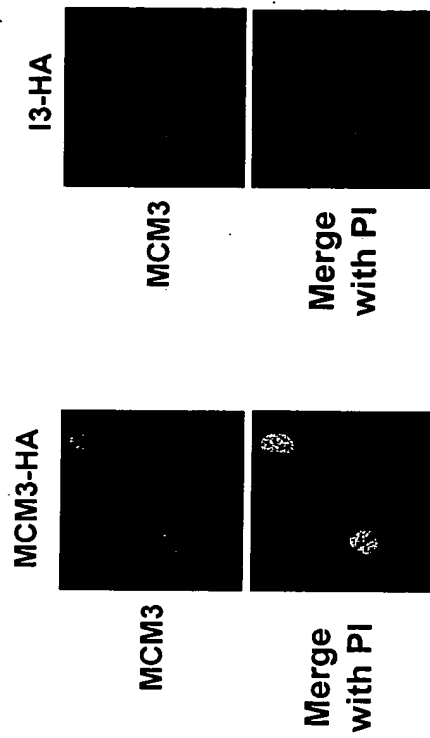


Fig. 40

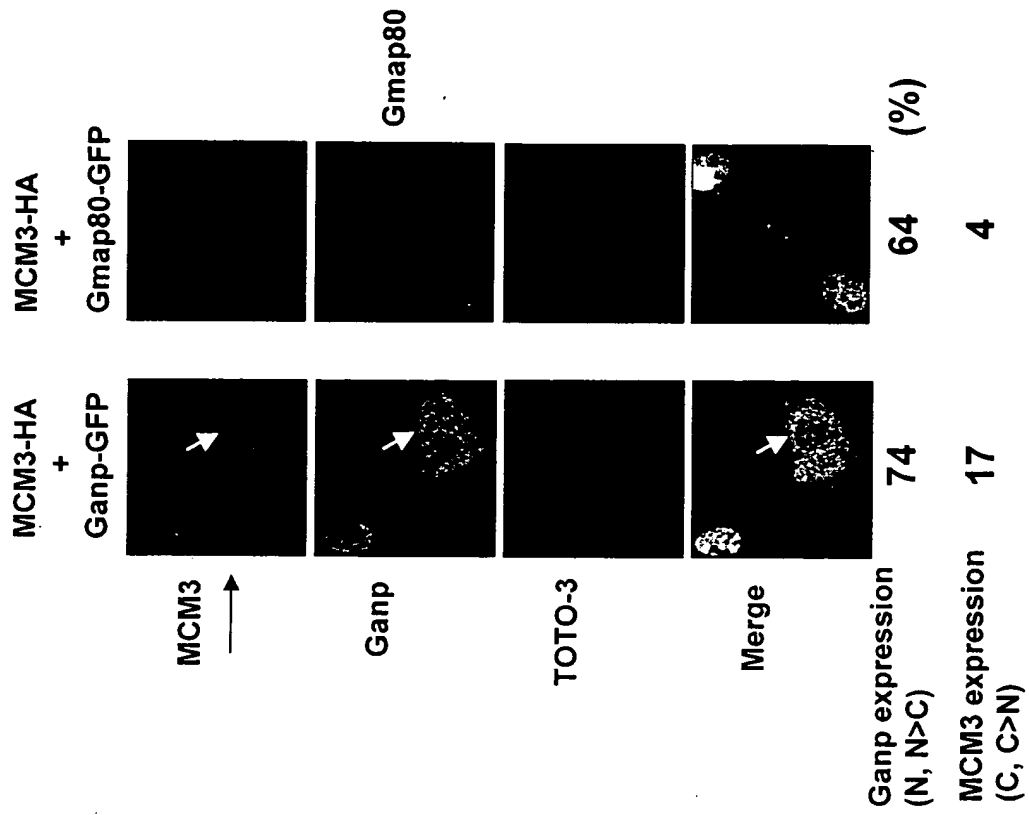


Fig. 41

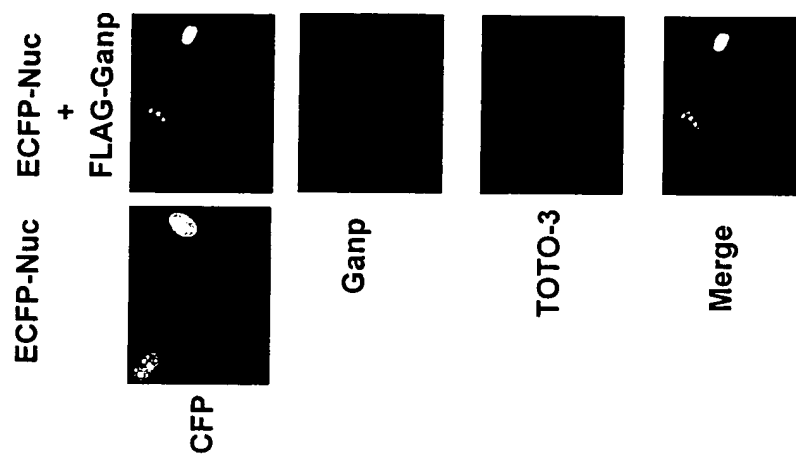


Fig. 42

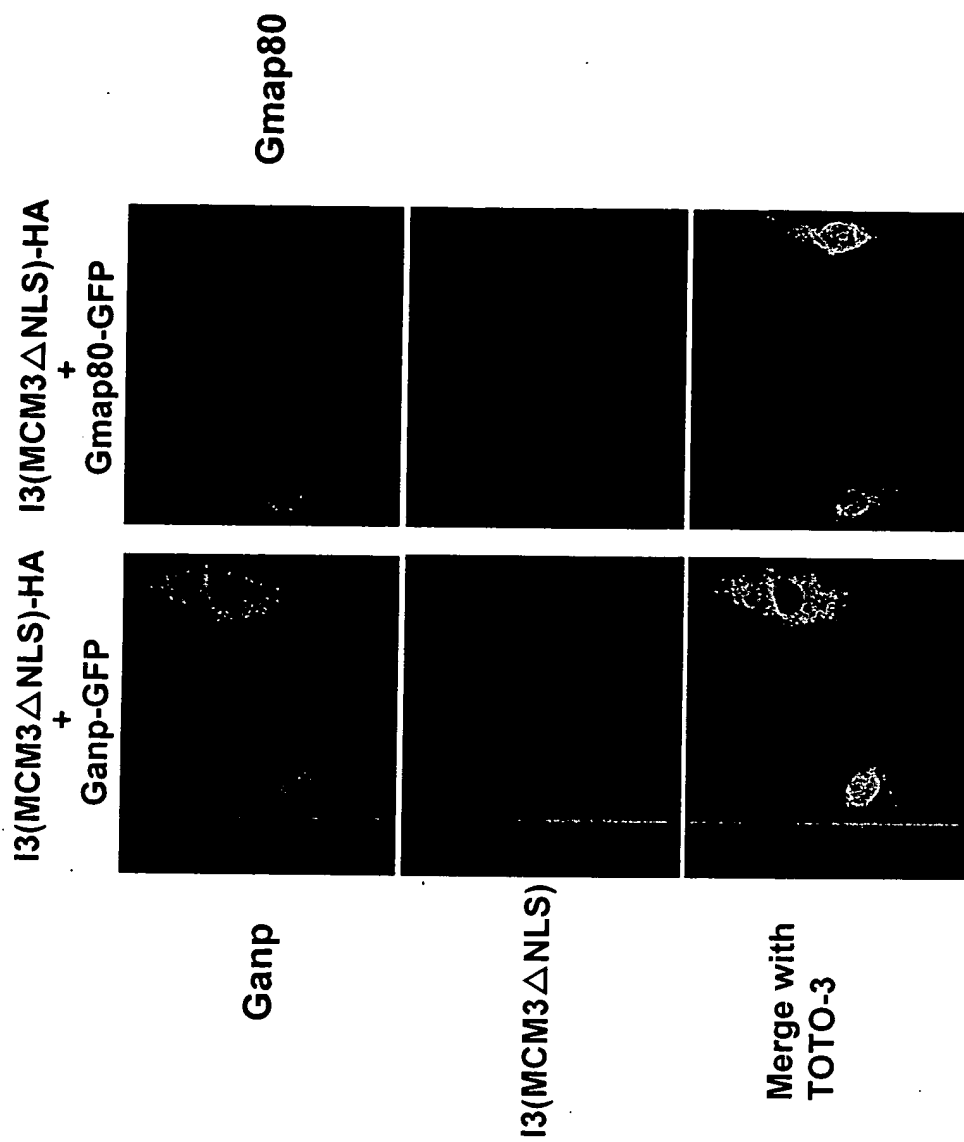


Fig. 43

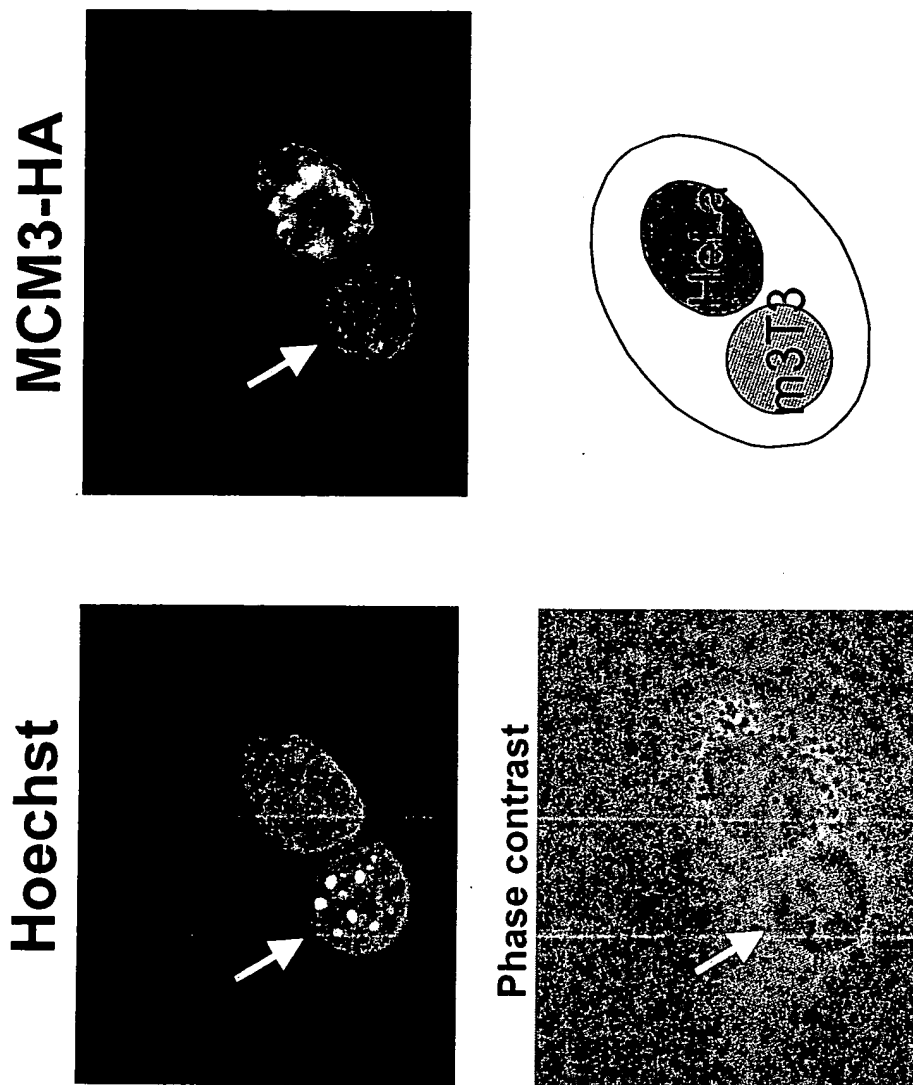


Fig. 44

